The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1691.—Vol. XXXVIII. LONDON, SATURDAY, JANUARY 18, 1868. (WITH SUPPLEMENT) {STAMPED ....SIXPENCE. UNSTAMPED..FIVEPENCE.

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 24 years.)

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

During the past fortnight the tone of the Mining Market has (according to Mr. CROFTS' predictions) considerably improved, not only the dividend mines be recommended, but others. Amongst the most eligible dividend shares to BUY, for further improvements, are the following:—GREAT LAXEY, VOR, HERODSFOOT, MARKE VALLEY, TINCROFT, WEST CHIVERTON, MARY ANN, WHEAL BETGN, WEST GODOLPHIN, SUMMER HILL.

PRINCE OF WALES, in consequence of splendid improvements, both east and west in the 55, have advanced from 5s. to 6l.s., 6s. The future prospects of the mine would even justify a much higher price for these shares.

Bankers: National Bank of Scotland, 37, Nicholas-lane, E.C.

MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,
has FOR SALE the following shares, free of commission:—

15 Chiverton Moor, £6 6 3	20 Frank Mills, 16s.	25 Rossa Grande, 13s. 6d.
10 Chiverton, £5⅛.	35 Gt. So. Tolgus, 22s 6d	10 S. Condurrow, 12s 6d
15 Colquite and Callington United, £2.	10 Great Laxey, £17⅞.	50 So. Grenville, 7s. 3d.
	30 Gt. No. Laxey, 17s. 6d	5 South Crofty, £15¼.
10 Clifford, £6.	20 Hingston Down, £2¼	15 South Darren, 32s. 6d.
25 Caldbeck Fells, 10s.	30 Lovell Consols, 10s.	10 Tincroft, £13¾.
25 Carn Camborne, 11s.	19 Marke Valley, £6¾.	40 W. Wh. Kitty, 13s 6d
35 Chontales, £3 17s. 6d.	20 Mining Assoc., 13s. 6d	5 W. Chiverton, £68.
50 Don Pedro, £3¼ prem.	15 North Crofty, £2⅛.	25 Wh. Grenville, 40s 9d
30 Drake Walls, 11s. 6d.	25 No. Treskerby, 30s. 6d	10 Wheal Uny, 34s.
20 East Russell, 30s. 6d.	50 New Quebrada, 14s 3d	50 W. Drake Walls, 9s 9d
10 E. Wh. Lovell, £8 11 3	20 Prosper United.	10 W. Kty. (St. Ag.) £2⅛
25 E. Carn Brea, 47s. 9d.	50 Pr. of Wales, 61s. 3d.	10 West Godolphin, £3¼
50 Frontino, 21s.	50 Port Phillip, 31s.	

Cash advanced on mining shares.

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for January, contains a comprehensive review of the Stock and Share Markets of the past year; a list of all the dividends paid in December; a selection of Investments paying 10 to 16 per cent.; and such information as is necessary to guide intending investors.—6d. per copy, or 5s. annually, post free.
Published by Mr. BAKER LELEAN, at his offices, 11, Royal Exchange, London.

MR. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

MESSRS. FREDERIC GILL AND CO., STOCK AND SHAREDEALERS, ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C., TRANSACT BUSINESS in all MINING STOCKS and SHARES at closest market nett prices, either for cash or account.

GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange), (25 years' experience), TRANSACTS BUSINESS in MINING SHARES, at close prices. Money advanced on mining shares.
Jan. 10, 1868. Bankers: Bank of England.

MR. J. B. REYNOLDS, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C., transacts BUSINESS in Joint-Stock Banks, Railways, Mining, and all Miscellaneous Securities at the closest market quotations. Every information supplied to investors free of expense.
J. B. REYNOLDS can, with confidence, recommend a few shares for investment paying 15 per cent. upon the present market price.
Telegrams promptly attended to.
Bankers: City Bank.
Jan. 18, 1868. Established Eleven years.

REYNOLDS' INVESTORS GUIDE.—Just published, considerably enlarged, containing very valuable information respecting most kinds of Securities.
Post free, on application to J. B. REYNOLDS,
70 and 71, Bishopsgate-street Within, London, E.C.

ROSE AND CHIVERTON UNITED.—FULL PARTICULARS of this very VALUABLE PROPERTY can be OBTAINED on APPLICATION to the UNDERSIGNED, together with a MAP of the DISTRICT.
J. B. REYNOLDS,
70 and 71, Bishopsgate-street Within, London, E.C., Jan. 18, 1868.

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
Last week I recommended the purchase of Westminster, Ebury, and East Snaefell shares, and can now add Central Snailbeach to the number. The bearing measures under the shale in the latter mine will at last appear to have been reached, and that portion of the lode which is being carried is not valued at less than 1¼ ton per fm. It should be borne in mind that Old Snailbeach, striking the ore in a similar way on the same lode, has since paid dividends for over three-quarters of a century. I look upon these four mines as now being placed beyond a speculation, and advise friends not to lose sight of them.
Now ready, a Plan of the East Snaefell District, in the Isle of Man, by Capt. W. H. Rowe. It shows the relative positions of East Snaefell, Great Laxey, and Great North Laxey, with the bearings of the different lodes and cross-courses; also a section of the East Snaefell workings and runs of ore.

Established 1852.

JOHN WM. HUTCHINSON, MINING AND GENERAL SHAREDEALER, has instructions to SELL the following shares at nett cash prices:—

20 No. Treskerby, 30s 6d	10 E. Carn Brea, £2¼.	15 Wh. Grenville, £2⅛.
15 Prince of Wales, £3⅛	5 Chiverton Moor, £6⅛	5 Clifford, £5 18s. 9d.
5 East Caradon, £5 3s 9d	20 Drake Walls, 10s. 6d.	20 East Russell, 29s. 6d.
10 E. Grenville, £2 12s 6d	10 No. Crofty, £2 13s 9d.	10 Wheal Uny, 82s.

WANTED TO PURCHASE, for cash, shares in Seton, Mary Ann, Trelawny, Chiverton, Chontales, and Don Pedro.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 13 years), has FOR SALE the FOLLOWING SHARES, at nett prices:—

2 Carn Brea, £24¼.	20 Chontales, 13s. dis.	15 Chiverton Moor, £6⅛.
10 Clifford, £5 7s. 8d.	5 Cook's Kitchen, £9½.	20 D.Pedro, £2 18s 9d pm.
20 Caldbeck Fells, 9s. 9d	4 East Basset, £12¾.	10 E. Carn Brea, £2 3s 9d
25 E.Grenville, £2 11s 3d	30 Front. & Bol., 19s. 6d.	20 G. Retallack, £2 11s 3d
20 East Rosewarne, 7s 6	10 East Caradon, £5 3s 9	20 East Russell, 28s. 6d.
5 Herodfoot, £38⅛.	10 Marke Val., £6 3s. 9d.	5 Great Wh. Vor, £17¼
20 No. Treskerby, 30s 3d	10 N. Crofty, £2 11s. 3d.	40 Prince of Wales, 61s.
50 G. S. Chiverton, 12s 6	25 Gt. S. Tolgus, 21s. 9d.	10 Gt. Wh. Fortune, £3
5 O. Westminster, £4⅞	50 Redmoor, 2s. 3d.	50 South Grenville, 7s 3d
5 S. John del Rey, £33¼	5 West Chiver., £67½.	5 West Caradon, £93¾
5 Summer Hill, £12¾.	25 W. Drake Walls, 8s 6d	20 Wheal Agar, 35s.
40 Wh. Grenville, 41s. 6d	1 Wheal Seton, £86¼.	20 Wheal Uny, 32s. 6d
25 S. Condurrow, 11s 9d	5 Wh. Mary Ann, £20⅛	50 New Lovell, 9s. 3d.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 19 years), has FOR SALE at nett prices:—130 West St. Ives; 10 Maes-y-Safn, £29; 3 West Chiverton; 10 Rose and Chiverton United; 100 Redmoor, 2s.; 1 Devon Great Consols, £440; 10 Great North Downs, £4 9s.; 30 Wheal Grenville, £2¼; 50 West Drake Walls, 9s.; 25 Great South Tolgus, 21s. 9d.; 5 St. John del Rey, 34; 110 Tamar Valley; 50 East Chiverton; 150 South Grenville, 7s. 9d.; 40 Okel Tor; 100 Lovell Consols, 11s.; 37 Colquite and Callington, £2 6s. 9d.; 20 Anglo-Brazilian, 41s. 6d.; 25 Don Pedro, £3 prem.; 50 Great North Laxey, 16s. 9d.; 100 West Tremayne, 6s. 9d.; 30 Old Westminster; 70 Wheal Grebor, 8s.; 100 Gwydyr Park, 3s.; 20 Great Retallack, 17s.; 3 East Basset, £13¼; 25 Chiverton Moor, £6⅛; 40 North Downs, 22s.; 50 Camborne Vean; 20 Frontino and Bolivia, 20s. 3d.; 2 Minera, £297½; 50 Sparnon, 17s.; 100 Pedn-an-drea, 9s.; 60 North Jane; 40 Central Snailbeach, 12s.; 10 Caradon Consols; 30 North Retallack.

ANNUAL REVIEW OF CORNISH AND DEVON MINES FOR 1867.
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST," of yesterday, January 17, 1868, No. 462, price 6d. each copy, forwarded on application, contains the continuation of his ANNUAL REVIEW of Cornish and Devon Mines, with important remarks on the PAST, PRESENT, and FUTURE of nearly all the leading Dividend and Progressive Tin, Copper, and Lead Mines, pointing out those mines most desirable to speculate or invest in at the present low price of shares.

CORNWALL AND DEVON MINES.—FOREIGN GOLD MINES &c.
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Jan. 17, No. 462, Vol. X., price 6d. each copy, forwarded on application, contains information on the following mines:—

Prince of Wales.	Wheal Mary Ann.	South Wheal Basset.
East Wheal Lovell.	Chiverton.	East Wheal Basset.
West Caradon.	Chiverton Moor.	Wheal Buller.
Grambler & St. Aubyn.	Cook's Kitchen.	East Providence.
Botallack.	West Wheal Frances.	Chontales.
Stray Park.	Wheal Uny.	St. John del Rey.
West Great Work.	East Rosewarne.	Don Pedro.
	Wheal Basset.	Anglo-Brazilian.

PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to *bona fide* investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.
PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-three years' experience.
(Two in Cornwall and Twenty-one in London.)
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

MR. EDWARD COOKE, STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.
Orders for all kinds of Stock Exchange securities, either by letter or telegraph, promptly attended to.
Mr. COOKE is a BUYER of any number of West Drake Walls and New Lovell at market prices.
N.B.—A Daily Price List on application.
Satisfactory references given in any town in the United Kingdom.
Bankers: Alliance Bank.

MR. W. H. CUELL
(late of the firm of WATSON and CUELL),
STOCK AND SHAREDEALER
1, FINCH LANE, CORNHILL.
References exchanged.
All transactions can be for cash or account.
Bankers: Bank of England.

MR. JOHN R. PIKE, MINING SHAREDEALER,
CROWN CHAMBERS, THREADNEEDLE STREET,
LONDON, E.C.

Established Fourteen Years.

MESSRS. WARD AND JACKMAN,
SHAREDEALERS,
CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Members of the Mining Exchange, London.
Closing prices, Friday Evening, January 17:—

Carn Brea	£ 24	to £ 26	Redmoor	1s 6d	to 3s
Chontales	3⅛	„ 3⅞	*South Basset	£ 7½	„ £ 10
Chiverton	4¾	„ 5	South Condurrow	10s	„ 12s 6d
*Chiverton Moor	6	„ 6¼	*So. Wh. Grenville	6s	„ 8s
Clifford Amalgamated	5¾	„ 6	So. Wh. Frances	24	„ 26
Cook's Kitchen	9	„ 10	St. John del Rey	31	„ 33
East Caradon	5	„ 5¼	Tincroft	13¼	„ 13¾
East Carn Brea	2⅛	„ 2⅜	West Chiverton	67	„ 69
*East Grenville	2⅜	„ 2⅝	West Caradon	9½	„ 10½
East Lovell	8¼	„ 8½	West Drake Walls	8s	„ 10s
East Rosewarne	6s	„ 8s	West Prince of Wales	8s	„ 10s
Great North Downs	4	„ 4½	West Wheal Frances	20	„ 22½
*Great Retallack	3¼	„ 3¾	West Wheal Seton	190	„ 200
Great Wheal Vor	17½	„ 18½	Wheal Agar	30s	„ 35s
Marke Valley	6	„ 6¼	Wheal Basset	80	„ 82½
*North Retallack	3	„ 4	*Wheal Buller	16½	„ 17½
North Treskerby	29s	„ 31s	*Wheal Grenville	1⅞	„ 2
North Wheal Crofty	2½	„ 2¾	Wheal Mary Ann	19½	„ 20½
Prince of Wales	3	„ 3¼	Wheal Seton	85	„ 90
Providence	27½	„ 30	Wheal Trelawny	8	„ 9

Messrs. WARD and JACKMAN are in possession of valuable information respecting all the above-mentioned mines, and are dealers for immediate cash or for time on.
They beg to refer to their remarks on page 41, respecting those mines in the above list marked *.
Jan. 17. Bankers: London and Westminster, Lothbury.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, has BUSINESS in the following shares for cash or time on:—

Bedford Consols.	East Carn Brea.	Okel Tor.
Bedford United.	Frontino.	Prince of Wales.
Clifford.	Gawton.	South Condurrow.
Chiverton Moor.	Great South Tolgus.	South Grenville.
Chontales.	Great North Downs.	Wheal Seton.
Devon Consols.	Great South Chiverton.	West Seton.
Don Pedro.	Great Retallack.	West Caradon.
East Caradon.	Herodsfoot.	West Chiverton.
East Lovell.	Marke Valley.	Wheal Agar.
East Russell.	North Crofty.	Wheal Grenville.
Rossa Grande.	North Treskerby.	East Grenville.

PRINCE OF WALES.—From my agent's report this morning the lode in the 55 east is worth 90l. per fm.; in the level above I valued it at 100l. for a few feet in length; shares are now £3 to £3⅛. Those who took my advice a month since, and bought at 48s. to 50s., can now realise a good profit. Parties desirous of purchasing shares in this mine for time on can be supplied through Mr. THOS. ROSEWARNE at the present market prices, or even a shade less.
I can recommend three mines, which are safe for a great rise within the next few months; those who have acted upon my advice can now realise handsome profits.
WANTED, any part of 1000 East Carn Brea, 2000 Frontino, 500 Chiverton Moor, 1000 Okel Tor, 500 Chontales, and 500 Don Pedro.
Money advanced on good mining shares. Office hours from 10 to 4.
Bankers: Bank of England.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1839.
PUBLIC SECURITIES may be divided into three classes:—
1.—THE STRICTLY SAFE, with regular dividends, and exempt from all liabilities.
2.—THE SPECULATIVE; some of great promise, others dangerous.
3.—THE BUBBLES of the DAY; intrinsically worthless.
At first sight it may seem easy to avoid the bad. It is not so. Meretricious appearances and fictitious dividends deceive the multitude. Hence the losses sustained annually by the public are counted by millions.
Capitalists who wish to avoid risks can rely upon effecting, through this Agency, good paying INVESTMENTS in the best and safest Securities upon the most advantageous terms.
FIVE PER CENT. INTEREST allowed upon DEPOSITS of all amounts withdrawable at one month's notice.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
Bank and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.
Mr. CHARLES THOMAS calls particular attention to the reports of the West Godolphin Mine which have from time to time been published in the *Mining Journal*; he also with confidence recommends the mine as an investment, equaling in prospects any mining property in Cornwall.
3, Great St. Helen's, London, E.C.

Second Edition, price One Shilling; post-free, fourteen stamps,
MINING FIELDS OF THE WEST:
A PRACTICAL EXPOSITION OF THE
PRINCIPAL MINES and MINING DISTRICTS of CORNWALL and DEVON.
Published by CHARLES THOMAS,
At No. 3, Great St. Helen's, London, E.C.

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE, LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, transact business in all kinds of securities at closest nett prices for cash or account.
SPECIAL BUSINESS in Marke Valley, Great Laxey, Great North Laxey, Don Pedro, and Tin Hill. Daily price list on application.
Bankers: London and County Bank.

Established Sixteen Years.
GRANVILLE SHARP AND CO.,
STOCK AND SHAREDEALERS,
32, POULTRY, LONDON, E.C.,
Have SPECIAL BUSINESS in the FOLLOWING SHARES, at close prices:—

West Chiverton.	West Wheal Seton.	Frontino and Bolivia.
Chiverton Moor.	Great Laxey.	Don Pedro No. del Rey.
Chiverton.	Great Wheal Vor.	St. John del Rey.
North Treskerby.	Prince of Wales.	Wheal Basset.
Wheal Seton.	Chontales.	

SHARES FOR SALE:—20 Kitty (St. Agnes), £2.
SHARES WANTED:—5 Wheal Mary Ann, £19 12s. 6d. per share.

SHARP'S GUIDE TO INVESTORS.—SHARP'S GUIDE TO TRUSTEES.
Dividends 10 to 20 per cent. per annum on present outlay.
For reliable information and safe investments, paying good dividends,
Consult SHARP'S INVESTMENT CIRCULAR,
GRANVILLE SHARP and Co., Stock and Sharedealers, 32, Poultry, London, E.C.
Circular, 6d. per copy; annual subscription, 5s.] [Established 1852.

SHARP'S GUIDE TO SHAREHOLDERS.—SHARP'S GUIDE TO CAPITALISTS.
Dividends 10 to 20 per cent. per annum on present outlay.
For reliable information and safe investments, paying good dividends,
Consult SHARP'S INVESTMENT CIRCULAR,
GRANVILLE SHARP and Co., Stock and Sharedealers, 32, Poultry, London, E.C.
Circular, 6d. per copy; annual subscription, 5s.] [Established 1852.

MATTHEW GREENE, STOCK AND SHAREDEALER,
ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.
Mr. MATTHEW GREENE recommends for immediate purchase Tamar Valley Silver-Lead shares—certain for a rise.
Mr. MATTHEW GREENE confidently asserts that no such chance is at present to be had as the shares in this mine. The discovery of an elvan course is pronounced by the agent (see report in this day's Journal) to be one of the most favourable indications in connection with this property.

MR. HENRY MANSELL,
STOCK AND SHAREDEALER,
No. 44, THREADNEEDLE STREET, LONDON, E.C.
LOVELL CONSOLS.—The lode in the shaft has greatly improved, now worth £10 per fm., and improving. H. M. advises his friends to increase their interest at once.
Member of the Mining Exchange.
Bankers: London Joint-Stock Bank.

MR. EDWARD BREWIS, PALMERSTON BUILDINGS,
34, OLD BROAD STREET, LONDON, E.C., has FOR SALE, free of commission:—5 West Chiverton, £67½; 2 Minera, £182½; 10 Maes-y-Safn, £27⅝; 40 North Crofty, £2⅜; 5 Gothic Lead, £1¼; 25 Lucy Phillips; 20 Summer Hill Lead, ex div.; 3 Buller, £17; 10 Chiverton, £5; 20 Don Pedro Gold, £3⅛ prem.; 50 Cashwell, £⅛; 15 Chiverton Moor, £57⅛; 15 St. John del Rey; 5 West Cornwall Granite, £7½ (£6 paid); 15 East Seton, 5s.; 100 East Bottle Hill, 3s. 6d.; 50 Wheal Emily Silver, £2; 20 Chontales, £3⅛; 20 South Condurrow, 11s. 3d.; 5 Clifford; 20 Prince of Wales; 2 Wheal Seton, £87½.

MR G. D. SANDY, STOCK AND SHAREDEALER,
No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION of STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.
Mr. S. recommends the immediate purchase of Tamar Valley, East Rosewarne, and South Condurrow shares, now selling at very low prices, and certain for a great advance.
Money advanced to any amount on legitimate stocks and shares.
References exchanged.

MR. EMANUEL BEAZLEY begs to notify that he will CONTINUE the BUSINESS of STOCK AND SHAREDEALER, as lately carried on under the name of MESSRS. J. D. GENN AND CO.
Orders promptly executed by post or telegraph.
A daily list of Closing Prices will be forwarded on application.
Mr. BEAZLEY recommends the immediate purchase of Clifford, Prince of Wales, Seton, New Lovell, Lovell Consols, West Caradon, and Redmoor. Information respecting these and several other mines may be had on application.
Member of the Mining Exchange.

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLERSBURY, LONDON, E.C.
LOVELL CONSOLS.—We again advise all our friends to secure a substantial interest in this mine, as the prospects are favourable for making profits at an early date. The lode in the shaft is rapidly improving—now worth £10 per fathom. Every information forwarded on application.
Bankers: London and Westminster Bank.

MESSRS. POWELL AND MOSS, SHAREDEALERS,
78, OLD BROAD STREET, LONDON, E.C., and Mining Exchange, have large transactions in Prince of Wales, North Treskerby, Frontino, North Crofty, Chiverton, Chiverton Moor, and West Chiverton. Parties dealt with at a fair margin on the market price.
PENHALE UNITED SILVER-LEAD MINING COMPANY (LIMITED).—We refer to the prospectus of this company in another column of to-day's Journal. Parties desiring an allotment in full may secure it by applying to us early.
Bankers: City Bank, Finch Lane.

MR. JAMES HUME, 74, OLD BROAD STREET,
TRANSACTS BUSINESS between BUYER AND SELLER, at a margin of 1¼ per cent.
WHEAL UNY.—A BUYER of these shares at full market prices.
PRINCE OF WALES.—A BUYER or SELLER at close prices, and also of Don Pedro, Chontales, North Treskerby, East Caradon, North Crofty, Chiverton Moor, &c. Bankers: The London Joint-Stock Bank.

CHONTALES GOLD COMPANY.—FULL PARTICULARS of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

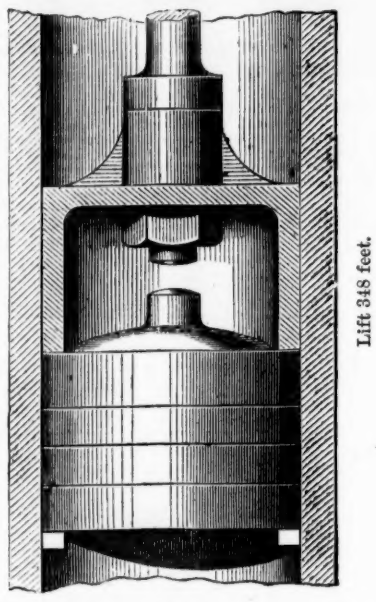
MR. JAMES STOCKER,
PALMERSTON BUILDINGS, OLD BROAD STREET, and MINING EXCHANGE, LONDON, E.C., STOCK AND SHAREDEALER in all kinds of Stock Exchange and Mining Securities.
Established Twenty Years.
Money promptly advanced on shares.
Bankers: London and Westminster, Lothbury.

JOHN RISLEY, STOCK AND SHAREBROKER,
(SWORN BROKER),
48, THREADNEEDLE STREET, LONDON, E.C.
SPECIAL ARRANGEMENTS as to commission on large transactions.
Agents' reports from Grenville, Retallack, Prince of Wales, and other mines forwarded to clients on the same day as received in London.

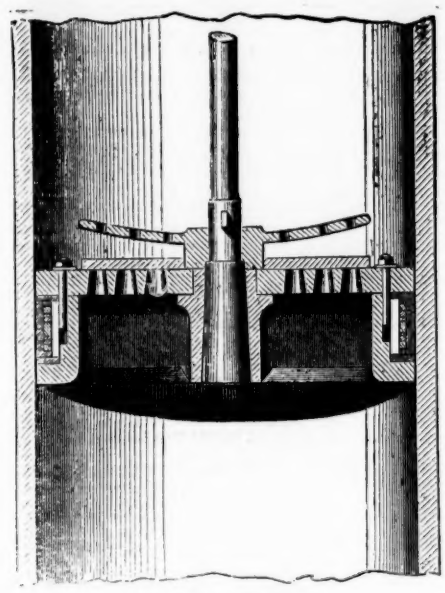
MATHER AND PLATT

MILLWRIGHTS, ENGINEERS, AND MACHINE MAKERS,

SALFORD IRON WORKS, MANCHESTER.

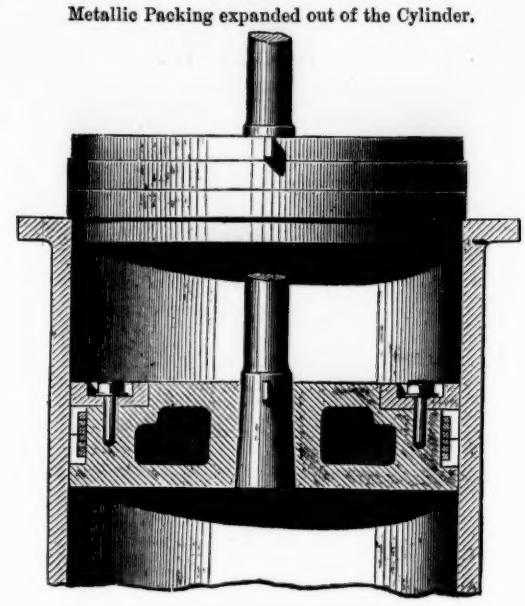


COLD WATER PUMP FOR DEEP LIFTS.



AIR-PUMP BUCKET.

Metallic Packing expanded out of the Cylinder.



PISTON IN THE CYLINDER.

MATHER and PLATT beg to call the attention of **ENGINEERS and USERS of STEAM POWER** to their **PATENT PISTONS, AIR PUMP BUCKETS, and COLD WATER PUMPS.** The estimation in which these Pistons, &c., are held is shown by the fact that 4760 have been made, as well as by the following Testimonials from gentlemen whose large experience and extensive practice enable them to judge of their qualifications :—

"*Bridgewater Collieries, Walkden, Bolton-le-Moors, October* 26, 1867.

"GENTLEMEN,—During the last 19 years, commencing in 1848, I have put in upwards of 33 of your patent metallic pistons and pump-buckets, into 49 engines and 20 pumps, under my care at the Bridgewater Trustees' Collieries. I can bear testimony to the very efficient and economical working of the same, and feel confident that with ordinary care they will give general satisfaction, wherever brought into use, possessing, as they do, many practical advantages over other pistons and buckets, being simple, durable, and effective. I have one piston (No. 671) which has been working daily for more than 15 years, one (No. 1586) 10 years, and one (No. 2246) over 7 years, without cost of repairs or trouble of any kind, except occasional cleaning. The smooth and highly polished condition of the cylinders during this length of time convinces me that the action of the metallic packing is so equable and perfect as to render the piston steam-tight and self-adjusting, without producing any appreciable friction. I have had two of your patent metallic pump-buckets working daily for over seven years, one lifting 300 feet, and one 348 feet, and both are yet performing good duty. I am now putting in one of 10 inches diameter patent buckets, to work 10 strokes, of 8 feet 4 inches per minute, under a pressure of 12 atmospheres, and feel confident of success, thus showing the superiority over other buckets, more especially where long lifts and simplicity are required. I herewith hand you an order for a 53-inch diameter piston and rod complete, also air-pump bucket, 26¾ inches diameter, and rod complete. Hoping you will forward the same to these collieries as early as practicable,

"I remain, Gentlemen, yours very respectfully,

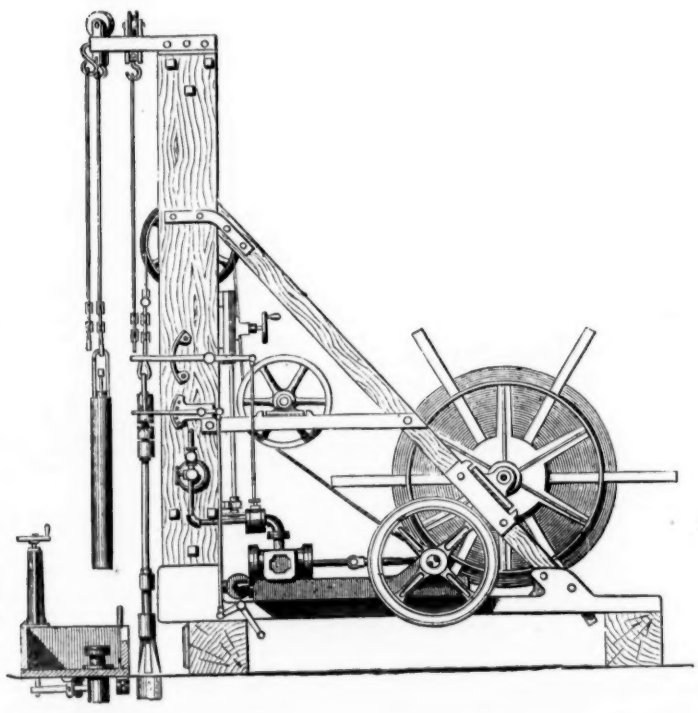
"Messrs. Mather and Platt, Salford Ironworks, Manchester." "JESSE TIMMINS, Colliery Engineer.

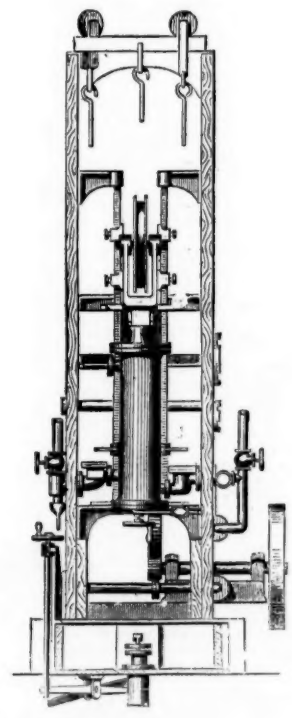
"*Frampton Cottrell, near Bristol, October* 31, 1867.

"GENTLEMEN,—I have ordered direct, or included in specifications of engines which I have prepared, upwards of 100 of your pistons and buckets, between the years 1850 and 1867, and I feel convinced they are the best pistons that have come under my notice, and if any proof was wanting as to my opinion of them, it may be found in the fact of my ordering the last 70 inch piston from you for our present works.

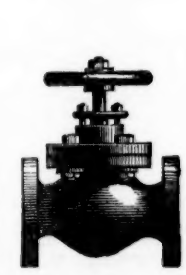
"I remain, Gentlemen, yours truly,

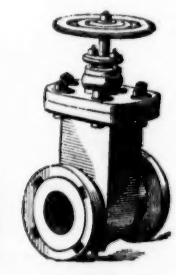
"Messrs. Mather and Platt, Salford Ironworks, Manchester." "WILLIAM BAILEY.





M. and P. beg to call attention to their Revised List of Prices of VALVES, TAPS, &c. They also request the notice of Water Companies and Hydraulic Engineers to their IMPROVED SLUICE VALVES for Water. The slides have Gun-metal Facings, are of Wedge form, and when screwed down are tight on both sides :—





GUN METAL TAPS.

Bore. Inches.	Price. £	s.	d.
⅜	0	4	0
½	0	4	6
⅝	0	6	0
¾	0	6	6
1	0	8	6
1¼	0	11	0
1½	0	14	0
1¾	0	18	0
2	1	2	6

CAST IRON STEAM VALVES, WITH GUN METAL VALVES AND SEATINGS.

Bore. Inches.	Price. £	s.	d.
2	1	2	6
3	1	17	6
4	2	15	0
5	3	15	0
6	4	17	0
7	6	0	0
8	7	5	0
9	8	15	0
10	10	10	0
11	12	5	0
12	14	0	0

CAST IRON SLUICE VALVES, WITH GUN METAL FACINGS.

Bore. Inches.	Price. £	s.	d.
2	1	10	0
3	2	5	0
4	3	0	0
5	3	16	0
6	4	14	0
7	5	14	0
8	6	16	0
9	8	0	0
10	9	6	0
11	10	14	0
12	12	4	0

Improved Patent Earth Boring Machines.

A considerable number of these Machines has been in most successful operation for some years in exploring for minerals and coal and the boring of Artesian wells, for supplying many towns, manufactories, &c., with water. Upwards of 50 bore-holes, from 6 in. to 24 in. diameter, representing in all 20,000 ft. of boring, have been sunk in various parts of the world, through rocks of every form and degree of hardness, from the New Red Sandstone to the Igneous formations, as well as Chalk and the London Clay.

The Machine is worked entirely by steam-power, requiring a small boiler, from 6 to 12 horse power, according to diameter of the bore-holes. The framing is made of wood, to render the Machine of easy transport.

The rate of boring is not appreciably decreased as the depth increases, as a *flat rope* is used in place of *rods* in the old system.

The attention of those interested in Metallic Mining is called also to an

IMPROVED BUDDLE,

OR

ORE WASHING MACHINE

Which they believe will be found of great benefit

TERMS AND PARTICULARS CAN BE HAD ON APPLICATION.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having also sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. F. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

"X. Y. Z."—When on January 6 we wrote our reply to "X. Y. Z.," East Grenville shares were 1⅞, and now 2½ Grenville were 29s., now 40s.; West Frances were 11, now 20; Great Retallack were 2¼, now 3⅛; Chiverton Moor were 5½, now 6, so that five out of the 10 named have already risen.

"A. B." (Manchester.)—We cannot answer the question at present respecting Pedn-an-drea and Crenver and Abraham. The shaft is going down on the course of the lode at West Prince of Wales, and any day indications of a course of ore may be seen. At Prince of Wales, the first parcel of ore was sold from the 30. The shaft was then sunk (in the country and not on the lode) to the 45, and a cross-cut driven to the lode. West Drake Walls has its machinery erected, but we should think not yet so deep as West Prince of Wales.

PRINCE OF WALES—"A Shareholder."—All our predictions here are being verified. East Caradon rose from 1000*l.* to 300,000*l.*, with very little better prospects than the Prince of Wales (should the 65 cut rich, of which there is now every indication), and at 3*l.* per share the latter stands at 37,000*l.* only. We certainly look for a cent. per cent. rise ere long. The bottom level is the richest course of ore ever seen in the mine, valued by the agent at 90*l.*, and by others at 120*l.* per fathom, and best in the *bottom of the level*—speaking volumes for the 65.

"T. H. G."—Chontales has turned the corner, and we are sanguine as ever as to results. Many thousands of shares are said to have been "beared" on the Stock Exchange, and it seems to us that they must rise considerably.

REVIEW CONTINUED.

WHEAL BASSET has sold this year 1745 tons of copper ores, for 9215*l.* 1s. 8d.; tin 292 tons, for 15,931*l.* 7s. 11d.; and paid dividends 7*l.* per share, or 3584*l.* During the year 1257*l.* were also laid out in alteration of Richard's pumping-engine, changing the pitwork on Richard's shaft to 16-inch lift, and boiler to Carnkie whim. Two 30-in. engines are being erected to work (in one house) the new stamps, which will have 48 heads to start with, and is calculated to be at work by end of July next. This will be paid for by the extra returns of tin. The 292 tons sold this year for 15,931*l.* 7s. 11d. were returned from 24 heads.

SOUTH BASSET (originally part of the above sett) has sold 88 tons of copper this year, for 331*l.* 13s. 5d., against an expenditure of 2958*l.* 17s. 6d. The mine is in a good situation, and several good points to come off.

GRAMBLER AND ST. AUBYN has sold this year tin and copper producing 1043*l.* 17s. 2d., and made calls of 4*l.* per share (1044*l.*), against an expenditure of 2929*l.* 18s. 5d. There are two or three points of interest in the mine. The 25, south of engine-shaft, will cut No. 2 caunter lode in 6 or 8 fms. further driving; and as it will be parallel with the bunch of copper in the old lode, similar results are looked for. In the 48 fathom level cross-cut, north of engine lode, it is calculated there are 2 or 3 fms. more to cut the lode. The adit end has been set to drive east of the eastern shaft, where there are 200 fathoms of unexplored ground, traversed by three cross-courses, and with a beautiful stratum of decomposed granite; this is considered a fine speculation in itself. In former times the mine paid 23*l.* per share (11,178*l.*) in dividends.

EAST BASSET has sold copper 1204*l.* 14s. 8d., tinstuff 825*l.* 9s. 5d., and made calls during the year of 4*l.* per share (2048*l.*), against an expenditure of 3845*l.* 13s. 7d. The mine, after paying large dividends for several years, has been very disappointing of late. It is thought the run of ore ground seen in the 120 dips west, and that in driving the 130 west it will be met with. The dividends paid by the mine amounted to 62,976*l.*, or 123*l.* per 512th share. This is one of the mines we recommended as strongly as the Prince of Wales, and bought largely for our friends at from 10*l.* per share up to 70*l.*; on cutting the lode they rose quickly to 200*l.*, and, as it will be seen, paid 123*l.* per share in dividends.

At NORTH GRAMBLER, in the 85 east a rich branch of ore has recently been cut, which looks like the beginning of a course of ore, and the 95, getting under it, is also looking better.

EAST ROSEWARNE is said to be again a promising concern. Two years since it was in the Dividend List, but a poor bar of ground was met with at the engine-shaft, which caused a falling off in the returns; but we are glad to say that it is now sinking in what appears to be a new shoot of ore, and is paying cost, and should the ore continue will soon resume dividends.

CARN BREA, once the richest dividend mine in Cornwall, having paid over 200,000*l.* in dividends, has caused some excitement lately, and shares, which at one time during the year were as low as 8*l.*, have since risen to 28*l.* per share. This is owing to an important discovery of copper ore on the Highburrow lode, where the aggregate value of the ends and winzes amounts to about 300*l.* a fathom. The tin in Barncoose and Teague's lodes has also much improved. In comparison with the mines in this run, Carn Brea is comparatively shallow; and, with the vigorous system of working now being pursued, there is no doubt they will again make good profits.

SATURDAY, JAN. 11.—Market active. Great Retallack advanced to 3¼, buyers. Grenville and East Grenville advanced. Prince of Wales largely dealt in. Great Retallack, 3¼ to 3⅛; Chiverton Moor, 5⅛ to 5⅞; Grenville, 33s. to 35s.; East Grenville, 2⅜ to 2⅝; Prince of Wales, 54s. to 56s.; West Chiverton, 67 to 69.

MONDAY.—Market very firm. Prince of Wales, West Prince of Wales, Grenville, Great Retallack, Chiverton Moor, West Chiverton, West Frances, East Russell, Chontales, and North Crofty in good demand. Prince of Wales, 54s. to 56s.; West Chiverton, 67 to 69; Wheal Chiverton, 4¾ to 5; Grenville, 2⅜ to 2⅝; Chiverton Moor, 5¾ to 6; Chontales, 3¼ to 3½; Great Retallack, 3¼ to 3⅛; East Russell, 30s. to 35s.

TUESDAY.—Very little alteration in the market to-day, and prices generally are about the same as yesterday. Prince of Wales, 54s. to 56s.; Grenville, 34s. to 36s.; Chontales, 3⅛ to 3¾; West Chiverton, 66 to 68; Chiverton Moor, 5¾ to 6; Chiverton, 4¾ to 5; East Grenville, 2⅜ to 2⅝; Great Retallack, 3⅛ to 3⅜.

WEDNESDAY.—Good demand for Chontales, Grenville, Prince of Wales, East Grenville, West Frances, and Chiverton Moor at an advance. Chontales, 3½ to 3¾; Grenville, 35s. to 37s. 6d.; Prince of Wales, 56s. to 58s.; East Grenville, 2⅝ to 2¾; West Frances, 17½ to 20; Chiverton Moor, 5¾ to 6; West Chiverton, 66½ to 68.

THURSDAY.—Market very active for Prince of Wales, Grenville, Great Retallack, West Wheal Frances, South Grenville, East Caradon, Chiverton Moor, and Frontino. Chiverton Moor, 5¾ to 6; Prince of Wales, 58s. to 60s.; Maes-y-Safn, 29 to 30; Great Retallack, 3 to 3⅛; East Grenville, 2⅜ to 2⅝; Wheal Grenville, 35s. to 37s. 6d.; West Frances, 17½ to 20; South Grenville, 5s. to 7s. 6d.; West Chiverton, 66½ to 68.

FRIDAY.—There is an active demand to-day for Prince of Wales, Grenville, East Grenville, Seton, Chontales, Chiverton Moor, Great Vor, Great Retallack, West Frances, East Caradon, South Grenville, and Carn Brea. Prince of Wales, 3 to 3¼; West Frances, 18 to 20; Grenville, 2 to 2⅛; East Grenville, 2⅜ to 2⅝; Chiverton Moor, 6 to 6¼.

IMPROVED STEAM-ENGINE FOR ROLLING-MILLS.—A magnificent upright steam rolling-engine has just been constructed at the South Brooklyn Engine and Boiler Works, United States, for the Trenton Iron Company. An immense cast-iron open pedestal sustains the cylinder, steam-chest, and connections, the connecting-rod and crank work inside the column near the bottom. The fly-wheel and spur-wheel are secured to the shaft by three massive feathers forged on the shaft, the intervals between which and lugs cast in the interior of the hubs are fitted with hard wood wedges, intended to receive and diminish the jar and concussion to which an engine employed for driving rolls must be subjected. The fly-wheel is 22 ft. diameter, and weighs nearly 25 tons. The cylinder is 46 in. diameter, and the stroke 40 inches. The total weight of the machine is 67 tons 13 cwts. The engine is calculated to make 75 revolutions per minute, at a steam pressure of 80 lbs., and is, although extremely compact, of 1200 estimated horse-power.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending January 12 amounted to 8558*l.* 10s. 2d.

Royal School of Mines, Jermyn-Street.

MR. WARINGTON SMYTH'S LECTURES.

[FROM NOTES BY OUR REPORTER.]

LECTURE XVIII.—Having devoted some attention to the mode of boring holes for the purpose of blasting, Mr. SMYTH made a few remarks on the direction the holes ought to have so as to produce the largest effects from the powder exploded in them. It was obvious that if the hole were placed at right angles to the face of the rock, the result would be merely to fire out the tamping like the contents of a gun, and so do no good. It was, therefore, in examining the face of the rock, and deciding upon the direction in which it was intended to bore the hole, that the judgment of the miner came into play in a very high degree—a fact which prevented the introduction of mere mechanical apparatus for boring holes instead of manual labour. If they were boring in a vein there would frequently be joints, as well as variations and differences in the texture of the rock itself to be considered. If they were acting upon a mere mass of coal the problem was easy enough, but in igneous rocks joints were often especially numerous, and the material in a short space would differ so much as to make the decision a matter of great difficulty. When the joints were like those of the stratified rocks, or had a tendency to parallelism, the operations were simple, but in other cases places must be carefully looked for in which an advantage in position could be gained. The dip of the joint, too, must be carefully looked to, and the variation of circumstances and modes of operation were inconceivably great. There was, however, always an objection to bore the hole upwards, on account of the greater labour it imposed than that of working downwards, so that it was often advisable to avoid such a necessity by cutting away a piece at the bottom, and then by small shots shooting down the rocks from above. Again, if the joints were vertical, it would be necessary to cut away one side until space was gained, to enable them to put in a tolerably heavy shot, and bring down the rock in larger quantities. The judgment of miners in placing bore-holes differed greatly. One man would be quite as competent as another to bore a hole in the same length of time, but the one might produce twice the results when the shots were put in. If the ground were very jointy or cavernous, the force of an explosion was apt to be expended in the direction of the joints or caverns, in which case it might be wrong to blast at all; but, at any rate, the holes must be much shallower—say 8 or 10 inches, instead of 20 or 24 inches. If the ground were of a uniform character and free from joints, it was obvious that the deeper the hole and the heavier the charge the greater would be the effect produced. The lecturer then, by a number of drawings, explained the modes of placing the bore-holes under the particular circumstances so as to produce the best results.

Those who understood the great hardness of the rocks to be operated upon in metallic mining, or at least the hardness of certain portions of those rocks, as even the older clay-slates, in which so many mines were worked, best knew the difficulties which stood in the way of employing machinery. The irregular nature of the stratification in which mineral veins occurred, and their continual intersection by material of the very hardest kinds rendered the wear and tear, and, of course, the expense so considerable, as to militate against the success of the strongest machinery. It was from this cause that scores of inventions by which it was proposed to cut away the rock had utterly failed. Most of these inventions were based upon the notion of a rotatory disc, armed with saws or chisels, but in all these cases the inventors deprived themselves of the advantages of gunpowder and other explosive materials, and thus had failed. Now and then they might have heard of machines cutting several feet a day, but on enquiry it always turned out that they were cutting chalk or clay, and that when they came to the hard rock they broke down. It was an entirely different question when it was proposed to apply machinery in the way it was now applied in constructing the great tunnel under the Alps, the success of which made it necessary to speak of that apparatus with a very considerable amount of respect. Whether that machinery would ever be applicable to mining operations was a question of doubt; for in driving a great tunnel like that of Mont Cenis, there was not only plenty of space for the machinery to work in, but there was an enormous capital to back the engineers in all the trials and in all the failures they might make. The mining engineer, on the contrary, would never be able to find capital for such experiments, or if he did, and they failed, he would be visited with the severest reprobation from his shareholders, and perhaps have the concern closed about his ears.

There had, however, been brought before the public during the last few years, and particularly last summer, two machines which had been actually at work underground, and were said to be doing good service. There were some others which, without mentioning names, he might say were all lamentable failures, for after working a month or two at a great expense they were found to execute a ludicrously small amount of work, and to have had constant break-downs. The reasons for this were not far to seek. The machines were too complicated, and were unsuited to the purpose from various causes. The two machines he had first spoken of were vouched for as being at work with success and economy in the mines in which they were used. The question was one of no ordinary importance, for if the expense of breaking the ground could be reduced only 20 or 30 per cent. many a mine could be made to pay which did not now cover its costs. The first of the machines he had spoken of was that of M. Dœring, at Altenberg, near Aix-la-Chapelle, where M. Max Braun was employing it in driving levels, where it was found to drive twice the distance with two men instead of six in a given time. The second was that of M. Bergström, a Swedish engineer at Persberg. These machines were based principally on the same idea. A small cylinder was placed in a convenient position opposite the spot to be bored, and then the borer, ending in the piston of a cylinder and brought to bear on the face of the rock, was made to strike with amazing rapidity, as many as 200 to 300 blows being given in one minute. As was the case with the ordinary boring tool, it was slightly turned before each blow was delivered. The power was acquired by compressed-air, by which, at the same time, a jet of water was directed into the hole, and thus the sand and dust cut by the chisel were forced out. In this way, in moderately hard rock, 6 in. would be cut in six minutes—1 or 2 in. in the hardest granite. Mr. Dœring had his machine at work last summer in London, and anyone might have seen it at work on the surface of the ground. It was now working on hard dolomite. The kind of borer was that of the ordinary chisel, with the end formed like a reversed Z. One important point in respect to machines of this kind was, that although they might be everything that was required, so far as mere boring on the face of a working went, yet if they could not be easily moved, and, still more, if they could not be used to bore holes, directed in any position, they would never be of any practical use in metallic mining. The apparatus of M. Dœring, however, had this advantage, that it could be brought close to the spot required, and the cylinder could be moved up or down at pleasure. It stood on a solid platform, which, although required to be of a certain weight to keep it steady, moved upon wheels with readiness and ease in the levels and up to the work. A stout perpendicular column, so to speak, of iron stood in the middle of the platform; the cylinder with the cutting tool was attached by an arm to the column, and by a universal joint could be applied in any direction. The Persberg machine was similar, and it was now employed upon very hard granitic rock. It was stated to have been at work two years, and to have driven several hundred feet in that time without any repairs of moment being required. It was remarkable, too, that the borers in these machines were not found to blunt anything like so soon as when the blows were given by the hammer, and thus they lasted five or six times as long. It would appear as though there was something in the rapidity with which the blow was given which preserved the edge of the tool. M. Bergström's machine was smaller than that of M. Dœring, and only weighed about a hundredweight, which, of course, was an advantage in its practical application. It consisted of a cylinder of the same kind as that of M. Dœring, attached to a long steel-pointed bar, which required to be fixed. That, however, was not a matter of moment, as the miners were so accustomed to fix struts and supports in their ordinary work that its fixing would take up but little more time than the removal of the other machines. The power in both cases was obtained from compressed air applied by means of flexible tubes. A third machine, that of Gen. Haupt, was exhibited at the French Exhibition, and was abundantly puffed and praised, but which he could not learn had been actually employed underground, as the other two had been. It certainly was a very ingenious, and might prove a serviceable, invention. Another machine might also be mentioned, as one proposed for mining purposes, and which had been employed to drill holes. It was brought out by one of the French railway companies, as the invention of their engineer, and it was said to be calculated to attack the very hardest rocks, as it was armed with diamonds. That was a startling fact, and one which did not sound as applicable in real practice; but yet, on examination, it would not appear altogether without plausibility. The boring tool was a cylinder, and the diamonds, eight in number, were mounted on it, the centre of the borer being open. The stones used were a sort of black diamond, not suitable for ornaments. The cylinder being put in rapid rotation by hydraulic pressure, a sort of annular cutting was scoped in the rock, and a jet of water being driven through the centre opening of the tool washed away the dust and sand. It must be confessed the machine worked with great rapidity, even in quartz, and the inventor assured him that the expenditure of the diamonds was very small indeed, as much as 20 inches being cut for twopence. The diamonds cost so much a piece, and when worn down too far to be serviceable what was left was saleable afterwards, to make diamond powder; and so it was calculated the machine might be used on a considerable scale without extravagance. This machine had not been tried underground, and he (Mr. Smyth) had great doubts whether it would prove so useful and efficient as the others he had passed under review. He did not think it was generally known that those two machines had been employed underground with so large a measure of success for a couple of years. The application of compressed air was an undoubted move in the right direction, but if they had to employ a steam-engine of considerable power in compressing the air, such a thing would be found inapplicable in a small mine. At the same time, in driving the more important adits and levels, or working at a moderate distance from the shaft, there was great reason to hope that a large amount of economy might be secured. In his former remarks on blasting he had alluded to gunpowder only as the explosive agent to be used, but of late years many new kinds of powder had been proposed. The ordinary blasting-powder had a very coarse grain, and varied a little in different districts, each of which had a reputation of its own. That used in the Redruth neighbourhood, for instance, had done its work well for many years. In some places it was even coarser, and where tan yard refuse had been employed in its manufacture it had an ungainly appearance, but it was capable of doing much good work. It was, however, difficult to compare one powder with another, unless they could try them on the same rock, by the same men, and in the same mine. Miners generally retained their old affection for gunpowder. A few years ago it seemed as though gun-cotton was about to play an important part in blasting; but several accidents then caused it to be looked upon with much shyness. Since that time, however, great improvements had been made in its manufacture by the Austrian artillery department, and those improvements were now being thoroughly tried and tested by the experiments carried on at Woolwich Arsenal, by Mr. Abel, with a view of making gun-cotton more useful and safe than formerly. It was now manufactured into a sort of rope, so that it could be cut to exact lengths to suit the purposes of the miner, and was, therefore, extremely handy, so that if in that form it could bear keeping in a damp atmosphere better than gunpowder, the improved gun-cotton was likely to come into use pretty largely in mining. Another modern explosive was nitro-glycerine, which had just had so much public attention drawn to it by the recent sad and fatal accident at Newcastle-on-Tyne. Accidents were apt to produce a violent prejudice against that which caused them, but all explosives, until they were understood by the men who had to deal with them, were liable to produce accidents. Although gunpowder was so well known, they must expect accidents even with that, when it was put into the hands of persons who did not know how to use it; and so with all other dangerous materials. The explosives now chiefly used by miners were gunpowder, gun-cotton, and nitro-glycerine. With regard to these three explosives, he could state an interesting fact which had been brought to his own knowledge. In the North Wales slate districts enormous quantities of explosive materials were employed, and it was the practice in bargaining with the workmen to allow them to select whichever explosive they preferred from the stores of their employers. It was found that although the majority of the miners preferred gunpowder over gun-cotton and nitro-glycerine, notwithstanding they were well acquainted with the convenience of the one and the enormous force of the other, the most careful of the men were fast taking to nitro-glycerine, which they had hitherto managed without the slightest accident, and with the most profitable results in respect to the work done. Nitro-glycerine had ten times the force of ordinary gunpowder, and if it could be used with the same amount of security, it needed no argument to show how advantageous it would be in mining. It certainly was much easier and more simple in its mode of application. Thus, in the simplest cases, instead of the "tamping" required when gunpowder was used, all that was necessary was to fill the hole with water, and pour the nitro-glycerine in. It sank to the bottom by its own specific gravity, and the fuse being lighted, the explosion took place with a force and effect far greater than anything produced by gunpowder or gun-cotton. He had lately been invited to witness at Llanberis a series of experiments on a newly-invented explosive, called dynamite. It was the discovery of M. Nobel, of Hamburg, who was the inventor also of nitro-glycerine. It was a powder, and if it proved to be capable of safe removal from place to place, it would, no doubt, also come very much into use. There was, however, a peculiarity about it, which also belonged to nitro-glycerine. When a small handful of dynamite was laid on a board, it could be fired by a match, with no more noise or effect than so much gua-cotton; but if it were exploded by the percussion of a sudden blow, it went off like nitro-glycerine, with a force and report that was tremendous. It exerted a kind of force which was exactly that which was required in mining, and he looked forward to the time when it and nitro-glycerine would become auxiliaries of the greatest importance to the work of the miner.

LECTURE XIX.—Mr. SMYTH remarked that in what he had already said he had contemplated only the charges for blasting required for ordinary holes, varying from ¾ to 1½ in. in diameter, but it frequently occurred in mining that it was needful to bore holes of much larger dimensions, and to use greater charges. Indeed, if larger charges were oftener used than they were, they might in many cases be productive of great advantage, especially when it was wanted to get rid of encumbering rocks. In many of our slate quarries, for instance, there would be overlying material from 20 ft. to 60 ft. or 100 ft. in thickness, which, whether greenstone or "bastard slate," must be got rid of as rubbish; and it was, therefore, important to remove it as readily and economically as possible. It was always important that economy should show itself when large masses were to be dealt with, and, therefore, if holes were put down by which, instead of a few ounces, many pounds of explosive material could be used, the work was greatly expedited, and more economically performed. In the slate quarries of Delabole, in Cornwall, holes were used of 3 or 4 inches in diameter, put down by borers of iron with steel "bits," chiefly by "jumping." In other words, the men merely lifted the tool, and let it fall by its own weight in the hole. When shallow, three or four men are put to it, and sometimes, in deeper holes, ten or twelve, in which case, for more convenience in getting hold of the borer, a stage is erected so as to have one set of men over the heads of the other, but all applying their strength at the same moment in the lift. Of course, manual labour employed in this way was expensive, and it would, in such cases be cheaper, probably, to use such machinery for boring the holes as that used in making artesian wells. Some nice questions arose as to the modes of lodging the explosive material in the bore-hole, and particularly as to how far the charge should fill up the hole, and in what direction the force of the powder should be expended. As he had already mentioned, the powder might be put in loose if the hole were quite dry, but when the holes were likely to be wet, pitched bags or cartridges were largely used. Messrs. Copeland and others carried on a considerable business in preparing these cartridges, and safety-fuses with them, all ready for use, so that the miner had merely to select from various weights and sizes to suit his particular requirements, and then having placed it in the bore-hole, to put the tamping on it, and the whole thing was complete. With the use of proper tools there was very little excuse left for the many accidents which were continually happening; but with the best of safety-fuses, and the most careful management, misfires would occasionally take place. These misfires were a great source of risk. The men ran back a great deal too soon to see what was amiss, and reached the spot not unfrequently just as the delayed explosion took place, and thus lost their lives, or were maimed, through their undue precipitation. Again, if it were really a misfire, the men would often bore out the tamping—a most dangerous practice, and a prolific source of fatality. In strictly-regulated mines the men were not allowed to return until a certain time had elapsed, or to bore out the tamping, but to make another hole near it, and put in another shot, which generally would explode, also, that which had missed fire. By way of avoiding these dangers, when large charges or a number of charges at once were to be fired, electricity or magnetism was now frequently applied. From the days of Franklin downwards, military and other engineers had given great attention to this subject, not only in this country, but in the United States, Russia, Holland, and elsewhere, but one of the earliest successes was that of Sir C. Pasley, who blew up the wreck of the Royal George, lost years ago at Spithead. Since that time electricity had been applied in practice very generally in great operations, but not so much in mining as it deserved to be. There was an idea prevalent that the apparatus was cumbrous, and that much scientific knowledge was requisite, and the like, but which really was not the case. The mode of firing cartridges by this means was very simple. Two extremities of the wires, to be connected with the negative and positive poles, were enclosed in a small tube, and having between their ends a thin platinum wire, or other substance, which would be strongly heated when the current was made to pass, together with some fine sporting powder, as an igniting cartridge, and placed in the middle of the charge. Then, smaller cartridges, or fuse-fires as they were called, could readily be made at the mine, or purchased ready made at a cheap rate. A very neat and effective example was that prepared by Prof. Abel, of Woolwich, at from 2s. to 4s. per dozen, according to the purpose for which they were intended—whether merely for experimental purposes, for mining, or for under-water explosions. The galvanic battery was the instrument most commonly used, and it only required the precaution of fixing it well out of reach of the effects of the shot. Professor Wheatstone devised an electro-magnetic machine, which was handy and portable, contained in a box about 1 ft. long, 8 in. deep, and 6 in. wide. It could be bought at prices varying from 5*l.* to 10*l.*—not a very serious amount of capital to start with. In firing large charges it became very important to be able to calculate, by something better than the rule-of-thumb, which miners generally had recourse to underground, how to proportion the amount of powder to the work required to be done. To this end a good deal had been accomplished from the days of Vauban, the great military engineer, to our own times. The effects to be sought were various. Sometimes it was only required to shake the rock, at others to blow it out at the surface, when the holes made were called "craters," and at others to dislodge large masses in other directions. Some of these operations had been carried on where many tons of powder were requisite, and it was important, therefore, to act with as great accuracy as possible. The first thing was to determine "the line of least resistance," or the direction in which the powder would take the greatest effect. This was generally, in a military mine, a vertical line, reaching from the centre of the charge to the surface, or the shortest line to the open air, and the charge was proportioned according to the ratio of the cubes of the lines of least resistance. Thus, taking the line of least resistance to be 6 feet, and finding by experiments that 22 lbs. of powder were required to produce a given effect in that case, the rock being of chalk or rubble, then a 7-ft. line of resistance would require 35 lbs. ($6^3 : 22 :: 7^3 : 35$). In the same way, if the line of resistance were 12 feet, the charge would not be double that at 6 feet; but as the cube of 6 to 22 lbs., so the cube of 12 would be to a result of 176 lbs. ($6^3 : 22 :: 12^3 : 176$). The increase, therefore, of the charge was extremely rapid; and the practical usefulness of these calculations was remarkably exemplified by the accuracy with which they were borne out in blowing down the chalk cliffs between Dover and Folkestone, for the South-Eastern Railway. It was then found that 1-32d of the cube of the line of least resistance in feet gave the charge in pounds. On this rule the calculation was made, and it was found that the charge for each of the side holes would be 5500 lbs., and for that in the centre 6750 lbs., although, in order to render the calculation safe, a rather larger charge (7500 lbs.) was allowed for the middle, making a total of 18,500 lbs. of powder. The three charges were fired simultaneously by a galvanic battery; and the effect, as described in the papers of the day, was a remarkable success—there was no great noise, and no great amount of fragments, but the base of the cliff bulged out, and the whole of the superincumbent mass sunk down. The height of the mass thus dislodged was 380 feet, and the quantity taken away was estimated at 405,350 cubic yards. The same method was employed in the great quarries at Holyhead from the year 1850 to a recent date, for the purpose of obtaining large masses of hard quartz rock, for the construction of the breakwater and other works at that port. Boring and blasting of the usual kind had become very expensive, and this mode of using large charges, fired by a galvanic battery, was introduced with immense success and economy. It was then found, of course, that one thirty-second of the cube of the line of least resistance would not do, but that the charge must be much larger, on account of the greater hardness of the rock, so that the calculations were based upon from a tenth to a fifteenth, and with similar success, the result being that 10,000 tons of rock were sometimes dislodged by one blast. In other operations elsewhere the same rule was found to apply. It was, however, obvious, from the space occupied by gunpowder, that in blasting operations an explosive of greater strength than gunpowder was a desideratum, and therefore they might expect to see such substances as nitro-glycerine coming into greater use every year in ordinary mining. At present, however, there were some rocks so very hard as to be incapable of economical treatment by blasting. This, no doubt, led to the maintenance of the ancient system of fire-setting, now confined to a very few districts, on account of the increased expense of fuel. It was a system formerly much used in Hungary, but it was kept up now chiefly at Felsö-banya, in that country, at Goslar in the Hartz, and in Norway and Sweden, where it was practised with great advantage. If the circumstances were all favourable, systematically arranged piles of wood were heaped against the face of the working, generally on a Saturday night, in the Hartz, and fired. In half an hour after the heat became fairly operative, small explosions began to be heard, and the rocks came down in large flakes. By Monday or Tuesday morning the workings were comparatively cool, and the miners often found as much rock displaced or fissured as would occupy them two or three days in removal. These operations were again renewed at the end of the week. At the mines of the Kongensgrube, near Kongsberg, this system was worked out with great skill, both as to the firing and the ventilation, at very considerable depths, and in comparison with other methods at a saving of 20 or 30 per cent. The arrangement here adopted converted the shaft into an immense chimney, 264 fms. in height, and a column of air reaching the fire from the drift a splendid combustion was kept up. The lecturer then described, by means of diagrams, the system by which fire-setting was used in Hungary in driving levels, and in working the wide lodes of that country. Unless the system of fire-setting, however, was kept within bounds, and unless care was taken to fill up the empty spaces, it could not be carried on in large and wide lodes without risk to the ultimate condition of the mines.

GEOLOGICAL SOCIETY OF LONDON.—Jan. 8: Warington W. Smyth, M.A., F.R.S. (President) in the chair. Francis Fedden, Geological Survey of India; Major Sir George Wingate, K.C.S.I., J.P., late of the Bombay Engineers,

Crofton, Hants; and John Baldry Redman, M.I.C.E., 6, Westminster-chambers, Victoria-street, S.W., were elected Fellows.

The following communications were read:—1. "Notes on the Lower Lias of Bristol," by W. W. Stoddart, F.G.S.

2. "On the Lower Lias Beds occurring at Cotham, Bedminster, and Keynsham, near Bristol," by C. O. Groom-Napier, F.G.S.

3. "On the Dentition of Rhinoceros Etruscus," Falc, by W. Boyd Dawkins.

On Wednesday the following papers will be read:—1. "On the Speeton Clay," by John W. Judd, F.G.S.—2. "Notice of the Hessle Drift as it appeared in Sections above forty years since," by Prof. John Phillips, F.R.S., F.G.S., &c.

INSTITUTION OF CIVIL ENGINEERS.—At the ordinary general meeting on Tuesday, Mr. Charles Hutton Gregory, President, in the chair, the following candidates were duly elected: as *Member*, David Phillips, superintending engineer, Peninsular and Oriental Steam Navigation Company, Bombay; and as *Associates*, T. P. S. Crosthwait, Vartry Water Works, Dublin; W. C. Faber, Chicklade; George Farren, engineer and general manager to the Lundy Granite Company; Major J. G. R. Forlong, R.E., superintending engineer, Public Works Department, Allahabad; Middleton Rayne, Kingston-on-Thames; H.Y. Richardson, Sunderland; Jagannath Sadasewjee, Bombay; Joseph Stewart, Auckland, New Zealand; Captain Hector Tulloch, R.E.; and Charles Wawn, Howden, Yorkshire. It was also announced that the Council, acting under the provisions of Section IV. of the Bye-Laws, had admitted as *Students* of the Institution, Henry Adams, C. A. Alberga, R. W. P. Birch, J. M. Campion, Lindsay Heath, A. W. Hemans, O. H. Howarth, W. H. King, F. H. Landon, A. H. Le Breton, F. H. Mollett, G. P. Pocock, G. H. Roberts, E. L. Robertson, D. S. Shaw, James Henry Waller, and Francis Wilton

Meetings of Mining Companies.

NEW BAMPFYLDE COPPER MINING COMPANY.

An extraordinary meeting of shareholders was held at the offices of the company, in Liverpool, on Tuesday (Mr. CHARLES HAND, the Chairman, presiding), when the resolutions passed at the extraordinary meeting, on Dec. 18, were read and unanimously confirmed.

The CHAIRMAN stated that there had been no change of importance in the mine since the half-yearly report was issued; and, referring to the explorations on the north lode, said a sample of ore had been taken from the back of the old workings, in the 20 fm. level, and reported by Messrs. Johnson, Matthey, and Co. to contain—Copper, 6·400; iron, 30·450; sulphur, 3·100; water, 6·500; oxygen, 13·050; trace of gold and silver, ·002; earthy matter, 40·450; loss, ·048=100, the proportion of gold being equal to 8¼ dwts. per ton of 20 cwts. of ore. The possibility of extracting this quantity of gold at a profit was under consideration and enquiry, and a visit of inspection would be made to the Vigra and Clogau Mine, where mineral containing only 1 dwt. 18 grs. per ton was stated to have yielded a profit of 500*l.* upon the year's explorations. Mr. Martin, the Chairman of the Vigra and Clogau, had favoured him with an order to inspect the machinery, and had also explained that the mineral referred to was of a very pure quality, containing neither sulphur, antimony, arsenic, or other substance to interfere with the process of amalgamation. The ores of the Bampfylde Mine being very rich, it was feared that the gold, although existing in an increased quantity, could not be worked out to a profit; the question, however, was one of great importance, and would not be prematurely relinquished.

The meeting then separated.

NORTH DOWNS MINING COMPANY.

A general meeting of shareholders was held at the offices, Bishopsgate-street Within,—Mr. HENRY MILFORD in the chair.

Mr. W. WARD (the secretary) read the notice convening the meeting, and the minutes of the last.

A statement of accounts was submitted, which showed a debit balance of 694*l.* 13s. 5d. The report of the agent was read, as follows:—

Jan. 15.—Since the last meeting the 60 fathom level has been driven 11½ fm.; in the last 3 fms. driving it has been in the elvan, which change has materially improved the lode in appearance and value; now worth 7*l.* 10s. per fm. The continuation of this level may be regarded as an important feature, being the commencement of the North Downs shoot or bunch of ore driven through for a consider able length in the 50. A winze has been sunk from the 50 to the 60, which has proved avaluable piece of ground. We have one stope working at this point, worth 15*l.* per fm. The 50 fm. level has been driven about 20 fms., though pretty good ground, as previously reported, varying from 5*l.* to 20*l.* per fm. The lode in the present end is worth full 10*l.* per fm., with a good appearance. There are two stopes at this point, worth in all 26*l.* per fm. Neither of these stopes are within a considerable distance of the end. The rise in the back of 50 fm. level is up 4 fms., the lode in which is worth 10*l.* per fm. This rise is needed for ventilation, both of this, the 50 and the 40, the same being 25 fms. from the 50 end. The 40 fm. level has been driven west 9 fms. since we made the discovery in the 50, which has been gradually improving, and from the appearance of it now, as well as the ore it is producing, we hope to be in a position in our next to place a value on it. You will observe we have ore at the 40, 50, and 60. The driving of the 70 will have our consideration after a short time, as well as proving other more shallow levels than the 40, when a proper time arrives, as it must be understood the adit is more than 30 fms. deep, which point, and between the 40, have produced very large quantity of ores in this lode, which will serve to guide us.—Bennett's Shaft: The 40 fm. level cross-cut has been driven south of this shaft 4½ fms., and intersected the south lode, the same being opened on east 4½ fms. This lode for the driving has produced a little ore; the present end is still further improved, but not producing sufficient ore to value; we shall sample at our usual time about 120 tons of very good quality ore, and should our expectations be realised by the proper development of this property, which we have a right to expect, we shall be in a position to fairly increase our returns.—Wheal Peever: I wish the adventurers of this mine to understand that this portion of the sett has not escaped my mind, or the watching of the development of Great North Downs my attention; and the time is not far distant when I shall submit to this company the importance of carrying my former recommendations into effect, being satisfied that there is not a better speculation in the neighbourhood, and not a mine working in this locality that has a better chance, for a small outlay, to come on the list of dividend-paying mines. This assertion may be regarded as coming from a very sanguine person; but I say, without the slightest hesitation, that it can be borne out by facts.—JOHN GRENFELL.

The CHAIRMAN moved that the report be received and entered on the minutes, and that the accounts be allowed and passed. He need hardly say that it afforded him a legitimate satisfaction, as it did his colleagues upon the committee, to meet the shareholders upon the present occasion, as it afforded an opportunity of congratulating them upon the improved position and prospects of their property. During the last three or four years they had been surrounded with many difficulties, but the mine was now opening out most satisfactorily—indeed, a really valuable property. This was the more satisfactory to him personally, inasmuch as he had been strenuous in his recommendations to those with whom he was associated to patiently persevere in its development. The returns during the past four months had not only met the costs, but had actually left a profit of 150*l.*; and, therefore, it was not too much to hope, from the encouraging prospects of the mine, that during the current four months, at least, results of a similar satisfactory character would be realised. He might mention that in the statement of accounts now before the meeting five months' costs were charged against four months' returns, so that the costs were brought up to the end of December, while there were about 120 tons of ore ready to be sampled, which would meet the cost of the current month. As far as the accounts were concerned, he should be glad to afford any information with regard to them; and as to the report, any question with reference to it would be replied to by Capt. Grenfell, who was present.

Capt. GRENFELL, in reply to a question with reference to the Peever part of the sett, stated that he was underground at that part last Friday, when he broke from the back of the 40 some very fine stones of ore. He was fully prepared to bear out all that Mr. Pryor had said about Peever. The Great North Downs lode passed through the entire length of the sett, and was not more than 75 fms. distant from the Peever engine-shaft. A cross-cut could be easily put out to cut that lode, but in addition to that the mine was traversed by two other lodes.——Mr. WARD said the shareholders had been induced by strong representations on his part to continue the development of the mine, and, therefore, he was much pleased to find that it was opening out such a valuable property. There were not more than 3372 shares, so that at their present market price the entire mine was selling for something less than 3000*l.*, which was an anomaly the shareholders should be acquainted with, seeing that during the past four months the sales of ore had realised 1505*l.* This fact compared most favourable with the price that was being realised in the market for shares in other mines which were not selling as much ore in twelve months as North Downs had done in the last four months, and was likely to continue to do in the next four months.

Mr. M'CALLAN asked if ore was being discovered in the same proportion that it was taken away?——Captain GRENFELL said that more ore was being discovered than taken away. They had only just struck the ore in the 60, but there was the strongest reason for believing the ore would be found to continue of at least the same value as in the 50, in which case they would very soon be able to increase the returns. There was only a very small proportion of ore stoped compared with the ground opened.

Mr. M'CALLAN said the shareholders were very much indebted to Capt. Grenfell for the skilful and economical manner in which he had developed the property, and brought it into its present favourable position. So satisfied was he (Mr. M'Callan) of the prospective value of the mine, that he had recently increased his interest; but still he hoped a call would be made, sufficient to clear off all liabilities.——The CHAIRMAN said there was one feature in the accounts to which he had intended to refer—and that was, that there were 2628 shares in the hands of the committee, and, therefore, the property of the shareholders. It would not be wise to deal with them now, because it was not at all improbable they would soon be worth 3*l.* to 3*l.* each. Although they constituted a credit item, it was not brought down as such.——Mr. WHITING suggested they should be cancelled.——The CHAIRMAN did not think that would be politic. He would prefer to see them allotted to the shareholders when they commanded a good market price at (say) half their negociable value—in other words, giving them a sort of bonus.

Mr. WHITING said the shareholders had a great deal to thank the secretary for, as without the assistance—pecuniarily and otherwise—he had rendered, the mine must necessarily have been stopped.

The report was received and ordered to be entered on the minutes, and the accounts were passed and allowed.

After some discussion, a call of 5s. per share was unanimously agreed upon, that amount being sufficient to liquidate all liabilities.

The committee of management were re-elected.

The CHAIRMAN said he had much pleasure in proposing that the best thanks of the shareholders be accorded to Capt. Grenfell for the skill, energy, and ability he had displayed in the development of the mine, and for the uniform manner in which his promises were realised by results.——Mr. WHITING having seconded the proposition, it was put and carried unanimously.

Capt. GRENFELL, in acknowledging the vote, said that it afforded him much pleasure to receive the thanks of the shareholders in North Downs Mine. It had always been his endeavour from the time he first became connected with the company to do his utmost to promote the best interests of the shareholders, and, therefore, it was with peculiar satisfaction that he met them upon the present occasion under such favourable circumstances. If with the prospects at the last meeting the mine had been able to return a profit of 150*l.* during the past four months, certain with the present prospects they were justified in believing that not only would costs the entire be met by the returns, but that the property would soon be brought into a dividend-paying condition.

The meeting then separated.

PENHALE WHEAL VOR MINING COMPANY.

A general meeting of shareholders was held at the offices, in Winchester-street, on Tuesday,—Mr. HOLROYD in the chair.

Mr. W. BATTYE (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

A statement of accounts was submitted, which showed a balance of liabilities over assets of 1220*l.* 2s. 7d.

The report of the agent was read, as follows:—

Jan. 11.—Since the last meeting we have changed the pitwork at Hollingsworth's engine-shaft from the 38 to the 74; cut ground for cells, stays, and pole connection; put in timber, fixed 11 in. main rods, cut ground, and fixed bearers and cistern; removed the two drawing lifts, and fixed 13½-in. plunger pole; cased and divided shaft from the 64 to the 74, put in penthouse and plat sollar, and sunk the shaft 2 fms. 1 ft. below the 74. We are still continuing this shaft in the country, with a lode both north and south a few fathoms, and underlying towards each other. These lodes separated in the 26; one went down north, the other south. The shaft was sunk on the south lode to the 38, hence no lode has been in the shaft, but the two lodes referred to have been approached by cross-cuts in the 54 and 74, the distance at the bottom level being less by 2 fms., from which I conclude that these lodes will eventually form a junction; of this I entertain a strong opinion. The shaft at present is in a floor of ground which traverses this district, and under which in the adjoining mines, Great Wheal Vor and Wheal Metal, from parallel lodes, an immense quantity of tin has been raised. In the 74 cross-cut south, to cut Penhale main lode, the ground is favourable for driving, and there is more water issuing from the end. Throughout the past quarter our progress has not been so good, owing to the water being let in whilst changing the pitwork in Hollingsworth's shaft; but from what I can see at Holroyd's shaft in the 10, 20, and 30, there are two distinct lodes, and in the 30 they are about 9 fms. apart, the main workings being on the south one, on which Holroyd's shaft is sunk from the 20 down.—Penhale Lode: We have cleared stuff, taken up sollar, and collared Holroyd's shaft; erected shears, capstan, horse whim, and shaft tackle; cleared foundation for balance-bob and fend-off bob stands; built substantial loadings, fixed the bobs, also wood rods and stands from engine to Holroyd's shaft, cased and divided shaft, put in sollars, and fixed ladders from the surface to the 30; put in stays and main rods, cut ground and fixed fend-off bob in the 20, cleared stuff in the 30, cut bearer holes, put in the timber, and sent drop lift down 6 fms. below the 30; fixed 11 in. lift from the 30 to the 20, and 12 in. from the 20 to the adit, which will be completed to-day, and put to work on Monday morning. We are progressing satisfactorily in clearing the 30 fm. level east and west. On Monday we shall commence to erect a horse whim and shaft tackle on Little Benjamin's shaft, for the purpose of clearing the shaft and levels, to enable us to work on the great cross-course, as the water will be forked by the new flat-rods. To the present tribute department I anticipate a good increase when the water is drained in Holroyd's shaft, and the bottom levels cleared, as from credible information we shall find tin ground that can be profitably taken away, and I fully believe, by exploring this part of the property in an energetic manner, you will be well repaid for the disbursement you incur. We have also sunk Sanford's shaft 1 fm. 2 ft. 4 in., driven in levels 14 fms. 2 ft. 4 in., forked the water and sent up a lift at Gutierrez's shaft, and cleared the adit level on Penhale lode. Number of hands at present employed underground:—Tutwork, thirty-one men and one boy; tribute, twenty men, one pit and one timberman, three fillers and three landers.—Surface: Spalling and other work, four men and four boys; enginemen, four; carpenters and sawyers, six men and two boys; smiths, four; dressing-floors and burning-house, two men, fourteen boys and ten girls: total, 110. We sold during the quarter 4 tons 12 cwts. 2 qrs. 26 lbs. of black tin, which realised 255*l.*, and have ready for market 3¼ tons more.—W. H. MARTIN.

The CHAIRMAN moved that the report be received and adopted, and that the accounts be passed and allowed. With reference to the accounts, he might mention that in the statement, showing a balance of liabilities over assets of 1220*l.*, there was included the current monthly cost, amounting to 400*l.*, which, although not due, had been incurred. And as to the mine, the report so fully detailed its position and prospects that little, if anything, was left for him to add. He might, however, advert to a fact which could not fail to be of the greatest encouragement to all interested in the company—that as the development of the mine progressed the mineralogical features of the ground were precisely identical with those met with at corresponding points of operation in their contiguous neighbour—Great Wheal Vor. Those familiar with the development of that productive mine were aware that a channel of hard ground had been passed through, both in Metal and Ivey's shafts, under which the enormous deposits of tin were found, the returns from which had steadily maintained the remunerative character of the mine throughout the late severe commercial depression; and by the gradual augmentation of the "reserves" the permanency of the property was established. Now, in Penhale Wheal Vor, the same hard channel of ground had been met with, and, what was of equal significance, it was met with at about the same depth as that in Great Wheal Vor. As a further evidence of the striking identity of the strata in the two mines, he might refer to the unusual but favourable feature, that tin was met with even in the "slide," the same, he believed, as was the case two or three years since in Great Wheal Vor. The Penhale lode was between the same two cross-courses as the Metal (Great Vor) lode, and also the Old Vor main lode, which returned tin to the value of something like 2,000,000*l.* sterling. Taking all these most favourable circumstances into consideration, there could not, he thought, be a divided opinion that the shareholders in Penhale Wheal Vor had the greatest encouragement, not only to continue the development of their property until this "slide" had been passed through, but also to believe that then their patience and outlay would be amply rewarded by being, it might be, the possessors of a mine equal in productive value to Great Wheal Vor.

Mr. BATTYE, in reply to questions, stated that they were unwatering Hollingworth's and Little Benjamin's shafts, with the expectation that from each of those points returns would be made.

Mr. RITCHIE enquired for what depth it was computed the present engine would successfully drain the mine?—Mr. BATTYE said the engine would be amply sufficient to drain the mine to 100 fms. deeper than the present depth. The way in which Capt. Martin had completed the whole work reflected the greatest credit upon his practical skill and zeal; and he, as well as all practical authorities, who had inspected the mine, concurred in the opinion that the mine under this channel of hard ground would become profitably productive. In addition to the circumstances referred to by the Chairman in connection with Great Vor, there was the fact that it was but a very few years since that that mine was in a similar position to that now occupied by Penhale Vor, but they persevered, although surrounded with apparently insurmountable difficulties, and the result was a permanent success. At one period the shares in very large numbers were purchased at a few shillings each, but the mine opened out in such an extraordinary manner that the shares advanced in market value to more than 40*l.* each.

Mr. ROBINSON said there could be no doubt the sinking of the shaft below this channel of hard ground was a point of vital importance, and for that reason he should urge the restriction of operations, so far as possible, to its more speedy attainment.——Mr. BATTYE explained that they were looking forward for some assistance in the shape of returns from the other points of operation. It was worthy of remark that Penhale Vor had sold twice as much tin as Great Vor had done at the same depth, the amount being 225 tons, which had realised nearly 4000*l.*

Mr. HOLLINGSWORTH said the interest he held was the best evidence of his opinion, but as the mine was developed his confidence in the realisation of a great success gradually increased.——Mr. BATTYE said that the last quarter's profit gave them nearly 100*l.* over and above all expenses—that is to say, the ore sold gave them that profit.

The resolution for receiving the report and entering it upon the minutes, and passing and allowing the accounts, was put and carried unanimously.

A call of 10s. per share was made, payable in two instalments.

The committee of management were re-elected. A vote of thanks to the Chairman terminated the proceedings.

TUNNELLING ENGINE.—One of Vivian's tunnelling engines has been in operation at Mr. Greaves's slate quarry, Festiniog, this week, but with what amount of success it is difficult to say, as the engine, it would appear, has not been satisfactorily put to work, only two instead of three boilers generating the air by which the revolving apparatus, to which about 48 drills are fixed by means of screws, is worked. When the three boilers are at work, the men attending the engine entertain the most sanguine expectations of its successful operation. The level is driven through the slate rock, in close proximity to the hard rock which separates the main vein from the new vein, as it is called.

"ENGINEERS' ARCHITECTS' AND CONTRACTORS' POCKET-BOOK."—The edition of this well-known pocket-book (so long published by the late John Weale) for the current year has just been issued. Of the contents of the book no more need be said than that the information given is carefully corrected to the present time. The Memorandum Book of Mr. Telford, and the list of members of the principal societies connected with the engineering profession, greatly enhance the value of the book, which is in every respect equal to anything of the kind issued.

"RAILWAY ALMANAC."—It would not generally be a very sagacious proceeding to take up an almanac when in search of interesting reading, yet it may safely be asserted that "The Railway, Banking, Mining, Insurance, and Commercial Almanac for 1868," which is edited by Mr. W. PAGE SMITH, of the *Railway Record*, affords substantial evidence of the truth of the proverb that "there is no rule without an exception." Although no information usually found in almanacs will be sought for in vain in that now under consideration, the calendar matter occupies but a small proportion of the book, which is, in fact, a series of elaborate and ably written papers upon various industrial subjects, forming a complete and very valuable commercial history of 1877. The almanac is entitled to find a place in the offices of the merchant, the manufacturer, and the general public, and is calculated to prove extremely useful to all.

METROPOLITAN IMPROVEMENTS.—A beautifully-executed map of metropolitan railways, tramways, and miscellaneous improvements, deposited at the Private Bill Office for Session 1868, has just been issued by Mr. E. STANFORD, of Charing Cross. The map is particularly interesting from the remarkable absence of new railway projects—an underground line from Islington Green to Moorfields being the principal scheme of this class. Yet it must not be concluded that projectors consider that the field for improving metropolitan intercommunication is filled—there is an elaborate series of tramways laid down from Hampstead to Clapham Common, for the service of the North and South; and from the Great Western Railway station, at Paddington, to Stratford Broadway, for the East and West. Another project, which may be referred to, is a canal for connecting Merton with the Thames. From the great number of persons affected by the improvements, the map will, doubtless, be largely appreciated.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. O. WASSERMAN, engineer, and Mr. J. H. HERBST, proprietor, of Cael, in Prussia, have specified a joint invention relating to improvements in refining lead. The process is described as consisting in submitting the red-hot desilvered lead, containing zinc, iron, and antimony, to the action and effects of chloride of lead combined with the zinc and iron, whilst the lead of the chloride of lead is combined with the lead to be refined. The desilvered lead is smelted in crucibles of cast or wrought iron, and the surface of the lead is covered with chloride of lead, and the temperature is increased till chloride of zinc is produced, which is indicated by the presence of dross. The chloride of lead is decomposed, and the crucible is covered with a layer of chloride of zinc. The dross is to be removed, and a further supply of chloride of lead is to be added, whereby the purification or refining of the lead will be accomplished. To further ensure the extraction of any remnant of antimony in the lead, caustic soda or potash should be added, the lead being merely at melting heat; thus antimonate of soda or of potash is formed, which may be utilised if desired.

A provisional specification of Mr. WM. P. STRUVE, of Cwm Avon, Taibach, South Wales, relating to furnaces for calcining copper ores and other ores and metals, may contain some features of interest. The furnace consists of four containing walls enclosing a space; two horizontal partitions passing across this space form a chamber, in which the ore or metal to be roasted is placed. There is a fire-place at one end of the furnace, and the heated products of combustion from the fire pass by passages from the fire-place into flues over and under the chamber; these flues are enclosed at the top and bottom respectively by other horizontal partitions, and the heated products having travelled to the further end descend into return flues at the bottom of the furnace chamber, and so pass into an underground passage leading to the chimney. The roasting chamber thus does not communicate with the flues; there may, however, be an opening from the one to the other, provided with a valve or damper. The roasting chamber is charged with ore or metal by means of shoots or passages passing through the top, and capable of being closed air-tight, so that little or no air may enter the roasting chamber. The sulphur and matters volatilised are conducted by a passage at the end into a condensing chamber. The material when it has been roasted can be discharged from the roasting chamber by raking it through openings leading into a vault under the furnace.

Mr. W. H. RICHARDSON, of Glasgow, has also specified an invention for improvements in the manufacture of iron and steel, and in the means and apparatus for effecting the same. After the ore is reduced in the blast-furnace to the state of molten crude metal, the furnace is tapped, and the liquid metal run off into a vessel or receptacle, when a blast of atmospheric air, which may be of a pressure of 4 lbs. on the square inch and upwards, is introduced into its mass through a hollow or tubular rabble or stirring rod, which may be operated by hand, or otherwise, the effect of the blast being introduced into the mass of liquid metal in the vessel or receptacle is that the impurities are very rapidly driven off, and a metal is obtained specially adapted for producing castings of a high quality, which may be run from the melted metal direct, as it is purified in the vessel or receptacle, or it may be cooled and afterwards melted for being run into castings, and for this purpose it may be used alone, or a proportion of pig-iron or spiegeleisen or other compound of iron and carbon may be mixed with it in the melted or unmelted state, according to the temperature of the liquid metal in the vessel or receptacle. Crude steel may be produced by the same process.

THE COLLIERY EXPLOSION FUND.—The City of London Committee formed in the mayoralty of Sir Thomas Gabriel for raising a fund for the relief of the sufferers by the Oaks (Barnsley) and Talke colliery explosions held a meeting at the Mansion-house, with a view to apportion the money at their disposal, amounting to 25,204*l.* odd, including interest, in the hands of their bankers, which had accrued during the subscription. There were present—Sir Thomas Gabriel, in the chair, Mr. R. C. L. Bevan, the banker, Sir Sydney Waterlow, Sir Francis Lycett, Colonel Stuart Wortley, Mr. J. P. Gassiott, Mr. Frederick Thompson, and Mr. Gibbs, the Lord Mayor's private secretary. With respect to the Oaks Colliery calamity, Mr. Patteson, an actuary, in the interest of the Barnsley Committee, after a careful consideration of the whole subject, and of the present and prospective claims of the various classes of sufferers, had reported that 41,225*l.* was the capital sum required to meet the emergencies by that particular accident. Towards that the subscription at Barnsley and the surrounding neighbourhood, with distant parts of the country, amounted to 29,528*l.*, and the Mansion-house Committee, on the motion of Sir Sydney Waterlow, seconded by Sir Francis Lycett, voted 11,697*l.* to complete the total sum necessary to meet the requirements of the sufferers as certified by the actuary, and a check for that sum was ordered to be remitted through Messrs. Barnetts, Hoares, and Co., to the Barnsley Committee. The secretary, Mr. Gibbs, was likewise directed to communicate the decision of the Committee, as an act of courtesy, to Lord Fitzwilliam, who, as Lord-Lieutenant of the county, had acted as chairman of the local committee. A check was also signed for 1500*l.*, voted from the Mansion-house Fund, towards a local permanent fund for Talke and its neighbourhood for the relief of sufferers by any future calamity of the kind, the local subscription there having been sufficient of itself to provide for the wants of the sufferers by the late explosion. This left a surplus of 12,000*l.* odd unapplied of the fund at the Mansion-house; and, acting upon a suggestion made by Lord Derby at the outset of the subscription there, the Lord Mayor's Committee had distinctly stated in effect in all their published documents that any surplus that might remain after satisfying the requirements of the Oaks and Talke sufferers should go to form a nucleus of a fund for the relief of sufferers by any similar calamity. That being so, the Mansion-house Committee, before seperating, voted 5000*l.* out of their surplus of 12,000*l.*, on the motion of Sir Thomas Gabriel, towards the relief of the sufferers by the Ferndale accident, and in aid of the local subscription which up to Saturday last was reported to amount to about 9000*l.* With that the business of the Committee, which had extended over a year, may be said to have ceased, and they disbanded themselves as a body, except as trustees of the nucleus fund, amounting to 7000*l.*

LIABILITY OF COLLIERY OWNERS.—An action was brought at the Bradford County Court by Thomas Ball, collier, of Drighlington, against Edward Bray and Wm. Henry Frankland, two members of the Drighlington Coal Company, to recover 50*l.* as compensation for injuries he had received in May, 1866, in one of the defendant's pits. Mr. Dawson was for the plaintiff, and Mr. Terry defended. It appeared that the plaintiff, at the time of the accident, was working on the night shift; a portion of the roof fell upon him, and he was so much injured that he was laid up for some time, and was afraid that he should not be able to follow his employment so efficiently as he had heretofore done. The accident was attributed to the improper removal of a number of puncheons, by the bottom steward, of which the plaintiff alleged that he complained. After evidence had been given in support of plaintiff's case, Mr. Terry contended that the accident had arisen through the neglect of the plaintiff himself, in not putting an additional prop under that portion of the roof which fell in, and as he had neglected to place his own puncheons, which he had admitted in cross-examination he ought to have done, the accident could only be looked upon as having been one of the ordinary risks of coal-getting. Mr. Terry also maintained, supposing the accident had happened as the plaintiff had represented, that the defendants were not to be held responsible. He then produced evidence in support of the position he took, and Mr. Dawson having replied, the judge thought it was a case for amicable settlement; but Mr. Terry considering a principle was involved, the judge said that the evidence had not convinced him either that the accident had been caused by the neglect of a fellow-workman, or that it had been one of the ordinary risks of coal-getting. He thought the plaintiff entitled to a verdict, but suggested that the terms should be agreed to. After a consultation between the advocates, Mr. Dawson said they had agreed that a verdict should be entered for 20*l.*, on the understanding that there should be no appeal, and that litigation should cease.

THE PROSPECTS OF THE IRON TRADE.—Reviewing the Iron Trade for the past year, Messrs. A. Sparrow and Co. (Liverpool) write—During the last 10 years the production of iron and steel has increased in France 300 per cent., in Prussia 350 per cent., in Belgium 400 per cent., and in England less than 40 per cent. In 1867 the export of rails was greatly in excess of the exports for 1866, and in the rail-making districts prices were characterised by a firmer tone than in Staffordshire, where the want of orders was, and is, felt severely, many of the works not having orders equal to half their capacity. The ironmasters of South Wales have arranged a reduction of 10 per cent. in wages, and in the North Yorkshire district the men are under notice for a similar reduction, but the South Staffordshire masters have met and agreed to make no effort to reduce wages and prices, though no doubt is felt but that a reduction in prices would result in an increased demand for export. In North Staffordshire masters have resolved to endeavour to effect a reduction in wages. The demand is light for shipbuilding and railway works at home, and, if the inactivity in these important branches of consumption continue, it will be felt severely by the iron trade

THE IRON TRADE IN 1868.—Mr. R. Hoyle (Newcastle-on-Tyne, Jan. 11) writes—It would, perhaps, be unprofitable to speculate on the future of the iron trade. So long as railways and other large iron-consuming interests remain in their present state of collapse, the iron manufacture can hardly be prosperous. Another drawback is presented in the unsettled state of political affairs abroad, and the existing and well-grounded fear that the peace of Europe may be disturbed. On the other hand, however, there is a general feeling that things have passed their worst. Confidence is returning, and will doubtless gather strength as the season advances. Iron shipbuilding and some other important branches of trade show symptoms of improvement. Upon the whole, therefore, it is, perhaps, not to much to expect that the year upon which we are now entering may be busier and more profitable than has been the year to which we have just bade adieu.

THE IRON TRADE.—At a dinner given to the employees, at the Eagle Ironworks, Hollinswood, by Mr. J. Adams, the recently-appointed manager, the chairman (Mr. J. Millington) proposed "The spring of all our joys—the coal and iron trade"—which at this time needed all their sympathies. It was, as all present were aware, in a fearfully depressed state, and the depression had been of unusually long duration, but he believed that there were already symptoms of a revival, and he hoped that in a short time we should see things return to their normal condition. He begged to couple with this toast the name of Mr. E. Jones, their chairman of directors, to whose energy and ability, through a long series of years, the trade of the district had been much indebted. Mr. Jones, in reply, said, addressing the workmen, that this dinner would appear to them like a feast after a fast. They would know what he meant: he referred to the sad fact that these works, in common with too many others, had been fasting for orders. It had not been a long fast, but it was the longest they had had since they were started. He was happy to inform them that some orders had come in with the new year, and that the wheels would be set in motion again on Monday morning. (Loud cheers.) He hoped and believed that they would not stop again during 1868. Ups and downs in the iron trade would come from time to time, and this

depression was far from being the worst that this district had experienced. It was 104 years since the first mill and forge started in Shropshire; and shortly afterwards trade was so bad that the Lilleshall Company seriously contemplated giving up business, pulling down their cottages and selling the bricks for what they would fetch. At that time the make of iron in Great Britain was but 500,000 tons per annum, and now it was 5,000,000. We must hope for the best. We were not the only sufferers, trade being in a similarly bad condition on the Continent and in America.

[ADVERTISEMENTS.]

From Mr. EDWARD COOKE:—The Mining Market has been very active during the week, and more business has been done in the same period of time than for many months past. This is consequent upon the greatly improved prospects of several mines, and the greater disposition of the public to invest in this class of property. Finance companies have failed to give the satisfactory results that were at one time anticipated. Bank shares are attended with heavy responsibilities, while the very best do not yield a corresponding rate of interest upon the market value of the shares, Railways, owing to the fictitious dividends that have been paid by some companies, and the gross mismanagement of others, are looked upon with distrust (and justly so) by the public as a source for investment. Hence, good mining property is commanding more attention. Such mines as Devon Great Consols, West Chiverton, South Caradon, Tincroft, Herodsfoot, East Lovell, Trumpet Consols, Great Wheal Vor, Prince of Wales, and others I could mention, are mines that are likely to yield from 10 to 15 per cent. with a great degree of certainty for many years to come, while there are many progressive mines, if properly selected and bought into now, would, in all probability, yield enormous profits to the investor within twelve months—PRINCE OF WALES MINE is an instance. As stated in my remarks a few weeks since, the shares in this mine were only about 8s. to 10s., or 6000*l.* for the entirety of the mine. At the present time the market price is over 36,000*l.*, or 3*l.* per share, and even at that price is considered very reasonable I have consistently advocated the merits of this property, and I reiterate my former opinion, that no such discovery has taken place in any copper mine since East Caradon proved so rich. In Prince of Wales Mine there are several important points to come off yet, which may add largely to the value of the property. I allude to the cutting of the same lode that is so rich now in the 55 fm. level at the 65, or 10 fms. deeper, and the cutting of the north lode at the 55 cross-cut. The lode in the 55 east was valued yesterday by an inspecting agent, in whom I have great confidence, at over 10*l.* per fathom. This level is being driven by six men, I believe, at 6*l.* per fathom, and to earn fair wages at this price, they should drive 4 fms. per month. In this distance such a lode (by the usual fair calculation of 5 fms. above and 5 fms. below the level) will open up 4000*l.* worth of copper ore in this level alone over what is being taken from it, and thus be adding largely to the reserves of ore. There is everything to justify the rise that has taken place in the price of the shares, and although I need not remind my readers that mining property partakes of a speculative character, the chances are greatly in favour of the Prince of Wales Mine becoming of an enhanced value.

As consistently as I have advocated Prince of Wales Mine, I do the same with the adjoining young mine, WEST DRAKE WALLS. The rich course of ore in the former mine is coming towards the latter. An engine has just been erected and put to work. As I have before stated, the office of the company is the same as that splendid mine West Chiverton. The calls in West Drake Walls, when required, will not, I presume, exceed 1s. per share. Besides containing the Prince of Wales rich lode, there are well known lodes in the sett. The shares, although in good demand, are now at a very low price, when compared with the chances of success the mine contains. WEST WHEAL KITTY is also a highly promising mine, that may, I think, be bought into with confidence. A sufficient call was made at the last meeting to pay off all liabilities, and, although I would not like to commit myself positively to the statement, I consider it very probable no call will be required at the next meeting. The mine is worked very economically, and returning tin about sufficient to pay its cost already. When it is considered that the adjoining mines have returned enormous profits to the shareholders, and the present position of West Wheal Kitty, instead of the shares standing at about 15s. they are intrinsically worth double that price. NEW WHEAL LOVELL adjoins that rich mine East Lovell to the west. Like that mine was when the shares were a few shillings each, New Lovell is comparatively neglected by the public, and those who deal in shares in mines. The time will arrive, however, when it will command more attention. The mine is looking very well indeed, and the shares at 10s. are ridiculously low in price. I have mentioned these three last-named mines on account of the real merits they possess, and the extremely low price the shares are selling at, feeling very confident there is a margin for a very great rise in their price. One of the mining prizes of 1868 will, I consider, be NORTH WHEAL CHIVERTON. In about two months the lode will be intersected in the 90, and, judging from the character of the lode in the 80, and the nature of the country in the new shaft now nearly down to the required depth to commence the cross-cut to the lode, there is every reason to encourage the expectation of meeting with a valuable lode for lead in the 90. What encourages this hope is the fact that the lode in every level has shown an improvement. In the 80 the lode is very large, containing lead and blende, with every indication of being very productive of the former mineral. From its proximity to West Chiverton, being only about 600 fms. apart, and similar character lodes and cross-courses, I look forward with confidence to see the North Wheal Chiverton shareholders participating, to some degree, in the extraordinary success that has attended those in West Chiverton.

WEST GREAT WORK is a mine that deserves special attention. Anyone desirous of becoming acquainted with the prospects of this mine, I will most readily (as a shareholder) furnish an order for any agent to inspect it. This mine possesses the elements for becoming one of the permanent tin mines of the important tin district in which it is situate. Already it is more than paying its cost, with every prospect at no distant period of entering the Dividend List. NORTH CROFTY, I am glad to say, is improving. The poor piece of ground in the 180 fm. level has given place to a productive lode, now valued at 35*l.* per fm., and approaching the rich tin ground worked in the levels above. GREAT WHEAL VOR is looking well, and the shares in demand at an advance. CARN BREA is, I learn, looking better. With a little advance in the price of metals this mine will pay well, and the same remark will apply to PROSPER UNITED. The latter mine has improved in the 100 fm. level, where there is a good lode for tin, thus showing that tin does hold down in this district. This should encourage the working of the Gryils district with energy. A finer field for mining enterprise does not, I think, exist in Cornwall than the whole of the Gryils Mines formed into one company, with a good subscribed capital. The advices from all the gold mines (with the exception of the disastrous fire at St. John del Rey) are all very encouraging. No doubt it is a serious matter, but the damage has probably been very much more than discounted by the heavy decline in the market value of the shares. I cannot imagine that a depreciation of 300,000*l.* is at all justified; one-third, or even one-sixth, of that amount will probably be more than adequate to repair all the damage. I have much pleasure in noticing a very excellent improvement in the CENTRAL SNAILBEACH MINE; the lode in the 164 fathom level has been improving in character for some time past, and is now producing 1½ to 2 tons of good ore per fm., and appears to be entering a long run of ore ground. I shall revert to this in my next.

DON PEDRO NORTH DEL REY still continues to yield large returns of gold. ANGLO-BRAZILIAN news is very much more favourable, and ROSSA GRANDE promises to to become a rich property. The PESTARENA directors have made a call of 2s. 6d. per share. The shareholders should understand that this is on capital account, to pay for the machinery. The mines are really making a large monthly profit upon actual working costs, and which profits ere long will be divided. The balance-sheet will, I believe, show very satisfactory results. The advices from CHONTALES GOLD MINES are very satisfactory, and indicate the commencement of the prosperity that I have confidently expected will be ultimately attained. Contemptible means have been resorted to with the view of inducing the shareholders to get rid of their shares, but success has not attended the means adopted, and the shares are still scarce for delivery. I do not look upon the small remittance of gold just received as any criterion of the future returns; but now that native labour has returned, and the shaft at the Consuelo Mine communicated with the level, I look to large returns from this rich mine alone. The Antonio and San Domingo Mines are also reported to have improved. Then, with regard to capital, it has been urged by certain parties, to suit their purpose, that it is nearly exhausted. I would here remind those parties that a very prosperous gold mining company, paying good dividends, expended all their capital, with the exception of about 5000*l.*, before success attended their efforts. Now, with regard to the Chontales Company, I believe I am correct in saying that, after providing for all liabilities up to the middle of December last, there would be 6000*l.* of the last call unexpended, and there is yet 13,000*l.* to be called, without taking into account the gold that may be raised. I am under an impression that the tide in the Chontales Company's affairs has turned, and from this date, without any unforseen occurrence, a prosperous future is in store.

From Messrs. WARD and JACKMAN:—There seems at present every probability that the commencement of the year 1868 is the beginning of a prosperous mining era, in which those who have invested in sound mining undertakings will meet with rich prizes. It is almost universally admitted that the present period is particularly favourable for investing in mines, as there are several causes tending to advance the value of this description of property. We have mentioned a few mines, in our advertisement on the first page, which we believe are well worthy the attention of parties who are disposed to run the risk of a small loss, with the view of making large profits. The whole of those we have named are easily dealt in, at a small margin between buying and selling price; and many, solely owing to the late stagnation of business, are now selling considerably below their intrinsic value. The following information respecting some of the mines alluded to may be found interesting.

WHEAL GRENVILLE presents features for becoming a copper mine in the western part of the sett. In the 90 west the lode is worth 2½ tons of copper ore per fm. In the 100 west, which is 3 fms. behind the 90, the lode is producing good tin; and in the 110 west, which is driven the same distance as the 90, the lode shows splendid indications for copper, and as the ore in the 90 is dipping west it is only reasonable to believe that ore will be found in the lower levels. The progress of these points should be closely watched; should ore be met with, the shares will rise to a higher figure.

EAST WHEAL GRENVILLE.—The lode in the 110 west is gradually improving, and as the level approaches the point at which the lode in the 95 is now worth 3 tons of good ore per fathom, a permanent discovery may be looked for. Perhaps it may not be amiss to remind our readers that this lode is the same as the famous "disputed lode" of West Basset and South Frances, and East Grenville is now at a depth at which the lode gave large profits in West Basset.

GREAT RETALLACK.—The lode in the 30 north is producing good lead, which contains native silver. This lode, in appearance and character, is different to anything before seen in the mine, and is wholly unexpected, as nothing of the kind was found at a corresponding point in the 20, the lead ground in the latter place being 13 fathoms beyond the 30 fathom level present end. The 30 is draining the 20, and it is expected that a winze will shortly be commenced upon a bunch of lead standing in the bottom of the latter place, worth 2½ tons of ore to the fathom. In addition to these features, a discovery is shortly expected in the shaft sinking below the 30, as the shoot of lead now in the 30 south, and worth 12 cwts. per fathom, will fall into the shaft in 5 or 6 feet further sinking.

SOUTH WHEAL GRENVILLE is a young mine that may ere long attract some attention. The 20 and 30 fm. levels indicate the existence of ore at no great distance, and neither Grenville nor East Grenville presented such fine indications at a corresponding depth.

WHEAL BULLER.—The prospects here are looked upon by those interested of more than ordinary promise. The 60, driving west on the north branch, is now worth 15*l.* per fathom for copper ore, and in driving the cross-cut north, in the 50, a branch has been intersected worth 7*l.* per fathom; driving has been commenced west on its course. The total value of the various points of operation this week are said to be worth 148*l.* per fathom.

At NORTH RETALLACK No. 1 shaft is down about 14 fathoms, upon a lode producing saving work for lead, and the agents speak confidently as to a productive lode being met with in the 20. This mine is a good speculation, and should be closely watched, as the shaft is going down close upon the boundary of Great Retallack, the ore in which mine is now dipping rapidly northward into North Retallack Mine.

CHIVERTON MOOR is looking very well. The 65, west of engine-shaft, is worth 5 cwts. of lead per fm.; and the lode in the 65 east is large, with good stones of lead; the shaft is now sunk 3 ft. below the 75. The lode in the 65, west of flat-rod shaft, seems to improve, and is turning out some good stones of ore.

SOUTH WHEAL BASSET is likely one day to repay the shareholders handsomely for their outlay and perseverance. The sett adjoins the celebrated Wheal Basset, and of which it was formerly a part; therefore, its position cannot be better. We have a special report on this mine, which we shall be glad to show anyone who may be interested.

Since the foregoing remarks about GREAT RETALLACK were written, the lead has come into No. 2 shaft, worth 3 cwts. per fathom. The stope in the 30 south is worth 15 cwts., and the 30 north 5 cwts. per fm., with native and ruby silver. The 20 south, on No. 1 lode, has also improved to 5 cwts. per fm.

From Mr. JAMES HUME:—The present time is noticeable as being the turning point from a period of extreme depression to one of active buoyancy. The question—what is value? so difficult a problem to solve in times of panic, is now being answered in a very decided manner by the investing public. There seems an intuitive feeling pervading the speculative and investing classes that at present many shares are more valuable than their quoted equivalent in coin; that the time is near when they can be turned into the same money two, three, or four times told; and, as in many things one extreme produces its opposite in the sequence, so have we generally found it in the Mining Market. We have had a dearth of improvements or discoveries—a year or two of famine in that respect. Is it not possible that we may now have a good crop of them? PRINCE OF WALES seems to make a beginning—a mine remarkable as being buffetted, now lauded, and now mistrusted by its nearest friends, who one week inform us that, on the whole, the bottom level has not turned out so good as the last, yet this week have to acknowledge a lode worth 80*l.* per fathom, and this when some very good judges foretold otherwise. Of course, such variations are tantalising, but the price of shares answers to the state of the mine; and, as I have often pointed out, the market is open to all, holders have themselves to blame if they allow the sunny moments to pass unheeded. The furor seems to be for shares of the lighter description, which have been of late much depressed. Amongst others, Grenville, East Grenville, Uny, North Jane, Central Snailbeach, Lovell Consols, Great Retallack, and others in various departments of the market. Several of these have interesting points to come off, calculated to dispel all the dark spots on the horizon of the mining market. In foreign mines, the sensation one has been the ST. JOHN DEL REY, the conflagration at which having for a time, at least, made the shares of the company the carrion of attraction for the vultures of the railway market. The question is—is the damage done to the mines fairly represented by 300,000*l.*, the fall in price? If 50,000*l.* will repair it, what will be the course of dealing quotations? The answer must be supplied by future advices from the works.

MINING NOTABILIA

WHEAL EMILY (Callington).—This mine continues to attract much attention, from the fact of the silver gossan now taking down from the lode standing in the adit level being more than sufficient to pay all the costs. We are informed that a sale of several tons of rich ore will take place in February, thus proving that the late Capt. Malichi did not take away all the riches from this mine—then known as Wheal Brothers.

WEST MARIA FORTESCUE.—The next sale of copper will be 345 tons, which is very cheering to the adventurers. The ends east of the engine-shaft are looking better than at any former period. The next sampling will be still larger than the present one. The new shaft is going down with all speed. The 20, east of this shaft, is in a paying lode that must improve in value, and there is no doubt when this shaft is carried down, and the levels extended east towards Great Devon Consols on the lodes, the mine will double its present sales, and the adventurers be rewarded by a great and lasting mine.

LOVELL CONSOLS.—This mine is evidently getting into a good course of tin. The lode in the new shaft is worth 10*l.* per fathom, and improving every foot they sink.

Few mines in the county of Cornwall have proved successful so quickly, and with so small an outlay, as the WEST GODOLPHIN, and great credit is due to the agents for the particular ability which they have displayed in the undertaking, which proves, beyond doubt, that there are still unwrought lodes in Cornwall which may be worked inexpensively, and from which tin may be produced, even at its present low value, at such advantages as will leave ample profits to the miner.

CENTRAL SNAILBEACH.—A great discovery, long looked for, has been made in this mine during the past week. The bearing measures have evidently been reached under the shale, and from appearances there can be but little question as to the future of the mine. Captain John Kitto says they are at present only carrying a part of the lode, from 2½ ft. to 3 ft. wide, which he cannot value at less than 1½ ton per fm. The Old Snailbeach Mines, which immediately adjoin, and are on the same lodes, have paid dividends for 80 years, and date their success from a similar discovery on reaching the bearing measures under the shale.

NORTH WHEAL BASSET.—As a shareholder in this mine, I feel truly thankful that there now appears a prospect of a movement in the property. When I purchased, shares were at 50*l.* each, and we received some very acceptable and pleasant dividends—sometimes 30s. and 2*l.* a share every three months. The mine requiring further development, we gladly put our shoulders to the wheel, and subscribed calls for nearly eight or more years. The mine is one of a group—South Frances, Wheal Basset, West Basset, and North Wheal Basset, the richest group in Cornwall. The last has been simply opening ore ground for eight years, but the others have been paying continuous dividends during the period; consequently, North Wheal Basset may be called the virgin queen of the group, and what is of great import is this—the machinery is perfect, and ample funds in hand to commence and return dividends.

WESTMINSTER.—The agents calculate raising this month 70 tons of ore, valued at 840*l.*, at a cost of between 500*l.* and 600*l.*; and to increase on the quantity next month. The old engine has been entirely dispensed with, and a very large decrease in the monthly cost will follow.

EL CHICO.—Only small branches of same class ore were cut in the cross-cut south, so Capt. J. R. Rule decided to drive east. The deep adit, driving east, is passing through a hard piece of ground; they were now (Dec. 7) within 7 fms. of El Tomo shaft, near the point where the bonanza commenced above.—[The report was received too late for insertion.]

GOLD MINING IN THE COLONY OF VICTORIA.—The usual quarterly summary of the gold mining statistics of the colony has been issued by the Secretary for Mines. The period to which it brings down information is Sept. 30. At that date the number of miners in the colony was 66,243, of whom there were 34,107 Europeans and 18,067 Chinese engaged in mineral workings, and 14,044 Europeans and 25 Celestials employed in quartz mining. On the alluvial mines there were 471 engines, of 9917-horse power, at work; and in quartz mining 542 engines, of 9330-horse power. The approximate value of the mining plant was 2,047,570*l.*; the number of square miles mined upon was 818; and the number of quartz reefs reported to be auriferous 2421. Ballarat employs by far the largest number of miners (13,871), Castlemaine comes next, Sandhurst follows closely, and then in order come Maryborough, Beechworth, Ararat, and Gipps Land. In the southern division of Ballarat there were eight, and in Dunolly 17 Chinese quartz miners, and these were the only two localities in which the Celestials have attempted to mine the rock.

HOLLOWAY'S OINTMENT AND PILLS.—These direct curatives act on the human body as mighty purifiers and healers, which slowly, gradually, and safely work a change for the better throughout the whole system. The ointment has almost miraculous powers in cleaning and healing old sores and ulcers which had defied the highest surgical skill; but perseverance is necessary to attain this end, as it would be unreasonable to expect that any ulcer or skin disease which had been firmly rooted in the body for years could be cured in a few days. It cannot be too much to ask a week's trial of these noble remedies in any chronic ulceration or other foul wound; in that short time they will prove their virtues.

WHEATLEY KIRK,
8, ESSEX STREET, MANCHESTER.
Twenty-five years' experience as
VALUER, AUCTIONEER, AND AGENT
for the purchase or sale of
MILLS, WORKS, MINES, ESTATES, LAND, BUILDINGS, STEAM ENGINES, ENGINEERS' TOOLS, RAILWAY AND CONTRACTORS' PLANT, MACHINERY, &c.
[See his Monthly Circular.] 45

THOMAS EDINGTON AND SONS,
PHŒNIX IRONWORKS, GLASGOW,
MANUFACTURERS OF ALL KINDS OF GAS AND WATER PIPES, BRANCHES, BENDS, WATER-TRAPS, TANK-PLATES, VALVES, and GENERAL CASTINGS.
ALSO,
RAILWAY CHAIRS AND SLEEPERS, AND GRIFFIN'S PATENT PERMANENT WAY.
LONDON OFFICE,—63, OLD BROAD STREET. 46

HERBERT AULT, ENGINEER,
DRAUGHTSMAN AND PATENTEES' ASSISTANT,
VALUER OF MACHINERY, IRONWORKS, RAILWAY and COLLIERY PLANT, and other works; DESIGNER and CONTRACTOR for every description of RAILWAY and COLLIERY PLANT, CONTRACTORS' and other LOCOMOTIVES, HOT AIR and HOT WATER APPARATUS, &c.
Preparer of models &c., for patentees, and every other assistance given upon the most moderate terms. Estimates given for taking down and erecting works and other machinery.
Applications addressed to HERBERT AULT, Netherton, near Dudley, will meet with prompt attention.
N.B.—HERBERT AULT begs to call the attention of gentlemen about to put up greenhouses or conservatories to his large assortment of designs at exceedingly low prices. 47

RAILWAY WAGON WORKS, BARNSLEY
MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by preferred payments through wagon-leasing companies. 48
WAGONS PROMPTLY REPAIRED.

THE BEVERLEY IRON AND WAGON COMPANY
(LIMITED),
MANUFACTURERS OF RAILWAY WAGONS, WHEELS AXLES, LORRYS, CARTS, WOOD WHEELS, &c.,
IRONWORKS, BEVERLEY, YORKSHIRE. 49

THE RAILWAY SPRING COMPANY (LIMITED),
DIAL WORKS, WEST BROMWICH,
MANUFACTURERS OF
RAILWAY, WAGON, AND CARRIAGE SPRINGS.
Orders executed with the utmost dispatch, of first-rate quality, and on moderate terms. 50

BAGILLT OIL COMPANY (LIMITED),
FLINT.
MANUFACTURERS OF BLACK GREASE
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).
LUBRICATING OIL, 1s. PER GALLON (Casks free). 51

WROUGHT-IRON TANKS, CISTERNS, GIRDERS, FUNNELS, &c., Plain or Galvanised.
CATTLE TROUGHS, IRON CART BODIES, &c., GALVANISED OR LEAD SERVICE PIPE, BRASS BALL VALVES, &c.
Merchants and Shippers supplied at the usual discount.
HENRY WATSON AND CO.,
No. 60, VAUXHALL STREET, LAMBETH, LONDON 52

HUNT'S PATENT ORE-SEPARATOR, AND GOLD-WASHING MACHINE.
THIS MACHINE, with the latest improvements, will be found WELL WORTHY of the NOTICE of ALL CONNECTED with MINING MATTERS, both as to its effectual working and cheapness, the licence from the 1st of December being considerably reduced.
Testimonials of the highest character, and all other information, can be obtained from Mr. JOHN HUNT, Porthleven, Helston, Cornwall; or of the manufacturers, Messrs. HARVEY and Co., Hayle, Cornwall.
N.B.—A Working Model of the Machine can be seen at the South Kensington Museum for Patents. 53

COMPRESSED FUEL
(BIRD'S PROCESS)
CAN BE MADE EVEN BY HAND-PRESS LABOUR AT THE PIT'S MOUTH, or at any WHARF or YARD where COAL or COKE DUST is obtainable.
The loss of dust by frequent transport, waste of "smalls" from falling unconsumed between the furnace-bars, or being driven up the chimney by the draught, and consequent choking up of flues, is diminished by this process.
The foreign matter in admixture being but one-half per cent. to the ton, and of a nature to ensure perfect combustion, the coal or coke treated remains unspoilt.
Drying is very rapid, and no artificial system needed.
Gluten, cement, and all ingredients needed for mixing can be supplied in bags as required. License fee, £10; royalty, 3d. per ton.
Apply to— JAMES BIRD,
No. 2, LAURENCE POUNTNEY HILL, CITY, LONDON. 54

UTILISATION OF COAL DUST AND MANUFACTURE OF ARTIFICIAL FUEL.
BARKER'S PATENTS.
THE LONDON PATENT COAL COMPANY (LIMITED) having purchased the sole rights to these patents throughout the United Kingdom, are now granting licences to coal owners and others for the use of the invention.
The process is simple and inexpensive; the cost of manufacture, including the amalgamating material, being only 2s. per ton.
The fuel is without smell, and is available for all the uses of ordinary coal. It occupies 33 cubic feet of space per ton only, as against 42, the Admiralty measurement for coal. In the various tests it has undergone it has in every instance beaten similar round coal in evaporative power, weight for weight.
For particulars of these trials, and every information respecting the patents, apply to the Managing Director, or the Secretary, 26, Martin's-lane, Cannon-street, London, E.C. 55

TO COLLIERY PROPRIETORS AND OTHERS.
IMPROVED PATENT COAL SCREENS,
FOR SCREENING AND TIPPING COALS DIRECT FROM THE PIT WAGON INTO RAILWAY WAGONS,
MANUFACTURED BY
JAMES MOWLE AND CO., FOUNDRY, CHESTER.
MAKERS of STEAM-ENGINES and BOILERS, PUMPS, and all kinds of MACHINERY for MINES. 56

IMPROVED APPLICATION OF WATER POWER.
THE TURBINE.
MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, after twenty years of experience, have brought their IMPROVED TURBINE to great perfection.
It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.
On low falls it has the great advantage of not being impeded by floods or backwater.
It is particularly well adapted for situations where the quantity of water is variable, and where all other wheels fail.
Its motion is extremely regular, and, when desired, a governor can be applied effectively.
This wheel is at work in a great many places, to which reference will be given. 57

PIG LEAD.
MESSRS. WESTON AND COLLINGBORN SOLICIT ORDERS for SOFT PIG LEAD, which they are producing of the very best quality
Prices on application.
WORKS,—SWINFORD, GLOUCESTERSHIRE.
OFFICE,—18, PETER STREET, BRISTOL. 58

RED LEAD SUPERSEDED.
NEW "ANTI-CORROSIVE METALLIC PAINT."—For some years past Messrs. PEACOCK and BUCHAN have been making careful experiments with an ECONOMICAL and entirely new metallic mixture of an ANTI-CORROSIVE nature, to supersede RED LEAD as an UNDERCOATING for iron ships' bottoms, and for priming and painting their hulls outside and in, also all kinds of out and indoor ironwork, railway plant, &c., as well as for outdoor woodwork, stone, and stucco, &c. Any colour paint will lay on over it. The proprietors have now perfected this metallic paint, and it will be found considerably cheaper than RED LEAD, at the same time effectually preserving the iron from rust, scaling, and decay.
It is ground in oil by steam-power, and packed in ironbound casks from 1 to 3 cwts. each. Price, delivered at Southampton, 32s. 6d. per cwt., packages included. Apply, in London, to W. J. MOYSEY, 39, Upper East Smithfield; and, in Southampton, to Messrs. PEACOCK and BUCHAN, or their accredited agents in all the principal cities and seaports of the kingdom. 59

GREEN SLATES.
GREEN SLATES OF ANY SIZE, and of the CHOICEST COLOUR and QUALITY, can now be OBTAINED from the DOROTHEA WEST SLATE COMPANY (LIMITED), CARNARVON.
The "CHARING CROSS HOTEL," "STAR AND GARTER HOTEL" (Richmond) 'LONDON-BRIDGE HOTEL," and many other public buildings, are covered with these elegant slates.
Orders will be executed in regular succession.
Apply to Mr. THOMAS HARVEY, General Manager, 9, Segontium-terrace, Carnarvon, or 33, King-street, Cheapside, London. 60

NOTICE.—CAPT. S. M. RIDGE, of LLANIDLOES MONTGOMERYSHIRE (late manager of the Brynpastig and Cwm Fron Mines, and others, in Shropshire and Wales), is NOW OPEN to INSPECT and faithfully REPORT UPON ANY LEAD MINE in either of these localities that may be confided to his care, having had better than 30 years' experience in lead mining, as miner and agent.—Address, Capt. S. M. RIDGE, Llanidloes, Montgomeryshire. 61

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland. 62

Mining Correspondence.

BRITISH MINES.

BEDOL-AUR.—H. R. Harvey, Jan. 15: The water has gone from the 100 yard level. We have resumed work in the end driving west on Milwr lode, and shall commence driving the west end on St. Vincent lode, where we have a little ore. The rise in the back of the 70 has not yet reached the shale, and the lode is poor; this is stopped now, as the men are working in the 100 yard level. The 77 yard level has been driven about 11 ft. north-east during the past fortnight; the lode is large and fair for progress, but rather poor. Jones's pitch, in the bottom of the 70 yard level south, west from the old shaft, is still yielding good lumps of ore. Davies's pitch, in the 70 yard level, south-west from the whim shaft, has much improved, yielding about 15 cwts. per fathom of lead ore. Edwards's and Jones's pitches are without alteration.

BOTTLE HILL.—J. Eddy, Jan. 16: The south lode in the 12, east of shaft, still continues to hold its size, from 3 to 4 feet wide, and turning out tinstuff of moderate quality. The lode in the 12 and 24 fm. levels, on the main lode, is about the same as to size and quality as when reported last week. I am happy to say we are again in full operation both with our drawing and stamping. We are getting on favourably with our dressing; I shall prepare another parcel of tin for market as soon as possible.

BRYN GWIOG.—Stephen Harper, Jan. 15: The lode in the 102, driving east from engine-shaft, still continues to show very favourable indications of improvement, being about 2½ feet wide, composed of spar, blende, and lead ore. The lode in the 90, west from said shaft, is about 1½ ft. wide, composed of spar, blende, and lead ore, but not sufficient to value, but from present appearances we shall shortly meet with the run of ore ground from the above level. The lode in the 85, west from No. 3 winze, has improved, now worth 1 ton of lead ore per fathom. I expect a further improvement in this level as we drive west towards Bramwell's shaft. The pitch in the back of this level (the 85 east) from No. 3 winze, is worth 2 tons per fathom. No. 1 stope, in the back of the said level, is worth 3 tons per fathom. The lode in the 75, west from Bramwell's shaft, has greatly improved in the past fortnight, now worth 3 tons per fathom, and promises for further improvement. From present appearances we anticipate opening out a good mine west from Bramwell's shaft. We are now sinking Bramwell's shaft below the 75, also taking down sufficient ground for tip-plat, &c. We are also busily engaged in fixing tram-road in this level (the 75 west). The lode in the 66 east is at present small and poor, but we hope soon a change for the better will take place. Our tribute department is looking much the same as for some time past.

BWDRAIN CONSOLS.—Robert Northey, Jan. 7: The lode in the 45 east is improving, worth 1 ton per fathom. There has been no change in the lode west in the same level since my last report. The lode in the 25 west has improved, worth 1 ton 6 cwts. per fathom. There has been no change in any of the other drivages for the past week. All our other operations underground are going on satisfactorily. The frost has completely stopped all our dressing for the present.

BWLCH CONSOLS.—Robert Northey, Jan. 6: The lode in the 30 east is 4 feet wide, and worth 1 ton of ore per fathom. The three stopes in the back of the 30 will yield 1½ ton per fathom. The lode in the 40 has improved, worth 1½ ton per fathom. The stopes in the back of this level will produce 1¼ ton per fathom. There is no change in the 50 or 60 fathom levels since last reported. The lode in the 70 is worth 18 cwts. per fm., but in consequence of the wheels being stopped by the frost, the water is in, and the men removed to another part of the mine. All our dressing operations are suspended.

CAPE CORNWALL.—R. Pryor, F. Hosking, Jan. 15: The lode in the 100 fm. level end, east of engine-shaft, is still large, but at this time is disordered by a cross-head, which is letting out a quantity of water. The lode in the winze sinking below the 90 is worth 6*l*. per fm. The lode in the 70 fm. level end, west of shaft, has a much better appearance, and is composed principally of mundic, with some rich yellow copper ore intermixed.

CARADON CONSOLS.—S. Bennetts, Jan. 14: The shaft is down to the 78, and the driving commenced this day. In the 68 west the lode is from 1½ to 2 feet wide, somewhat disordered, yet containing some good ore throughout. The stopes above the 58 are not so productive as they have been.

CARGOLL.—J. Grose, R. Tyzzer, Jan. 15: Michell's engine-shaft is sunk 6 fms. below the 140; lode 2 ft. wide, composed of much blende and rich lead ore. In the 140 north the lode for the last 9 feet has been passing through a squeeze, but we are pleased to inform you that it is again enlarging, with a leader of lead in the bottom of the level 6 in. wide, with a good branch of blende on the footwall. In the stopes in back of the 140 south the lode is 4½ ft. wide, producing much mundic, blende, and good work for lead ore. The 130 south is yielding about 7 cwts. of lead ore per fm. The 40, north from Sargent's, is producing saving work.

CASHWELL.—J. Peart, Jan. 4: The lode in the drift below Scar Limestone does not contain quite so much ore, but still continues a fine lode. In the drift roof going into the stopes there is quite as good ore as any we have driven through, and I have no doubt but good ore will be in the stopes, as far as we have opened out, which is about 12 fms. We are rising in the slaty hazle, which is so far only poor, but have a good strong lode. We are also making a rise into the 5 yard limestone, 12 fms. west of where we were raising the ore in my last report. The ground is whole, and contains some ore, but we are not into the limestone yet.

CENTRAL SNAILBEACH.—John Kitto, Jan. 14: The lode in the 164 yard, or bottom, level, west of shaft, now produces ore, which I cannot value at less than 1½ ton to the fathom. We are only carrying on driving in a part of the lode, at present from 2½ to 3 ft. wide, and, judging from appearances, I think there is no reason to doubt of having entered a long run of productive ground.

CHANTICLEER.—W. Wasley, Jan. 16: The lode in the 110 yard level, driving west of shaft, at 35*s*. per yard, and 80*s*. per ton for ore, is full 20 in. wide, composed of clay, spar, &c., which is producing occasional lumps of ore, and looking very likely for an improvement. The ground is easier for driving than on the setting-day.

CHIVERTON MOOR.—Jas. Juleff, W. Bennetts, Jan. 16: The engine-shaft, sinking below the 75 fm. level, is down 4 ft. The 75 cross-cut, south of engine-shaft, is in 7 fms., at present spare for driving, notwithstanding it is a good-looking strata for producing lead. In the 65, east of engine-shaft, the lode is 3 ft. wide, producing stones of lead, with kindly appearance. In the 65, west of engine-shaft, the lode is 4 ft. wide, worth 6 cwts. of lead per fathom. In the 65, east of the flat-rod shaft, the lode is 2 ft. wide, with stones of lead. In the 65, west of flat-rod shaft, the lode is 2 ft. wide, producing saving work for lead, with a most promising appearance. The stopes are producing a fair quantity of lead. We are still cross-cutting south at the north trial shaft; thus far, no lode or branch met with.

CLARA UNITED.—J. Davis, Jan. 15: Llywernog: The frost having left us, the mine, which has been flooded up to the 40, is now drained to within 10 feet of the bottom of the 50 fm. level. The men have resumed work in the stopes, and in the bottom end men are driving the 40 fm. level east, where the lode is improving, both in size and character, and is worth 7 cwts. of lead ore per fm.

CRELAKE.—Wm. Skewis, W. Hooper, Jan. 16: The men from the 86 west are for the time put to drive the 40 fm. level cross-cut north, in order to prove if there is any more lode standing in that direction. As soon as we are satisfied on this, the men will again be put back to the 86 fm. level. The 62 fm. level is set to drive by two men, at 2*l*. 15*s*. per fathom; no change to notice in the character of the ground—still disordered. We have set a winze to sink in the bottom of this level to four men, at 4*l*. per fathom; lode 3 ft. wide, worth 8*l*. per fathom. No. 1 stope, in the back of this level, is set to four men, at 2*l*. per fm.; lode 3 ft. wide, worth 6*l*. per fathom. No. 2 stope is set to six men, at 1*l*. 15*l*. per fathom; lode worth 10*l*. per fathom. The 50 west is suspended for the time, in order to put a rise through to the 40; set to four men, at 2*l*. per fathom; lode worth 5*l*. 10*s*. per fathom. No. 1 stope, in the back of this level, is set to four men, at 1*l*. 15*l*. per fathom; lode worth 6*l*. per fathom. No. 2 stope is set to four men, at 1*l*. 17*s*. 6*d*. per fathom; lode worth 6*l*. 10*s*. per fathom. The 40 west is set to drive by four men, at 4*l*. per fathom; lode 2½ feet wide, worth 5*l*. per fathom. A cross-cut is set to drive north from this level by two men, at 1*l*. 10*s*. per fathom. No. 1 stope, in the back of this level, is set to four men, at 1*l*. 15*s*. per fathom; lode worth 6*l*. per fathom. No. 2 stope is set to four men, at 2*l*. 5*s*. per fathom; lode worth 17*l*. per fathom. The 28 west is set to four men, at 3*l*. 15*s*. per fathom; lode 3 feet wide, composed of mundic, capel, and copper ore, worth 10*l*. per fathom. The rise in the back of this level is set to four men, at 3*l*. per fathom; lode 3 ft. wide, good saving work; and the stope in the back of this level is set to four men, at 1*l*. 8*s*. per fathom; lode worth 5*l*. per fathom.

CUDDRA.—F. Puckey, Jan. 15: At the 142 fm. level we have cut into the lode 3½ feet at the furthest point, which is all a good lode for tin, and by this day week we hope to be able to speak correctly of its value, as it is our intention to try a sample of the tinstuff which by that time we shall altogether have broken from this place. So far as seen the lode in the 142 is very promising to be a good and productive one. The stopes and pitches are without alteration to notice.

EBURY.—F. Evans, Jan. 15: The lode in the shaft, sinking below the 40 fm. level is 2 feet wide, and producing stones of lead ore. There is a change for the better, and appearances favourable for lead. We expect to get down to the 50 by the end of this week.

EAST CARN BREA.—Isaac Richards, Jan. 14: The lode in Thomas's engine-shaft is 1½ ft. wide, and produces for the length of the shaft (12 ft.) 3 tons of copper ore per fathom.—Thomas's Engine-Shaft, No. 3 Lode: In the 80 west the lode is 1½ ft. wide, and consists of capel, quartz, fluor, mundic, and good stones of copper ore. Tom's rise, in the back of the 80 east, is communicated with the 70 fm. level. The ground in Davies's cross-cut south, at the 80 west, is favourable for driving. The lode in the 70 east is small and unproductive. The lode in the 60 east is 1 ft, wide, composed of capel, quartz, mundic, and a little copper ore. The lode in the 50 east is small and poor. The lode in the 50 west is 1 foot wide, consisting of quartz, capel, mundic, and good stones of copper ore.—Buckley's Shaft, No. 6 Lode: In the 60 east the lode is 1 ft. wide, composed of capel, fluor, mundic, and a little copper ore. The lode in the 50 east is 1½ ft. wide, consisting of capel, fluor, quartz, mundic, and stones of copper ore.

EAST CHIVERTON.—J. Grose, R. Southey, Jan. 15: Since last general meeting we have continued the 25 fm. level main cross-cut, north from Bartlett's flat-rod shaft, 14 fms. In this driving, and since passing through No. 1 lode, we have intersected two strong lodes, or branches, of a promising character. The present end is now chiefly composed of very soft, decomposed elvan and killas, and to-day we are driving through a branch of friable quartz, containing blende, mundic, and good spots of lead ore. This cross-cut is now opened 25 fms. from shaft, and driving by four men, at 40*s*. per fathom. On No. 1 lode we have opened west 20 fms., and in this driving the lode is from 6 to 15 in. wide, composed of flookan and gossan, with fine mundic interspersed throughout. Part of this driving was in hard ground, but the present end is in soft killas, very favourable for progress. We have about 35 fms. further to drive to get under the shoot of silver-lead ores passed through in the 12, east from boundary shaft. We have now six men driving this level, at 2*l*. per fathom, and we shall push this with all speed, as there are very strong chances of making good discoveries. We also purpose to cross-cut from this level, after the same is further advanced, and cut into No. 3 lode, thus proving the three lodes with all speed and economy. In conclusion, we recommend the continuation of present operations, for independent of the level going west under the lead shallow, and looking at the beautiful channel of ground in the north cross-cut, situated as this mine is, being to the east of, and adjoining, the celebrated West Chiverton Mine, and possessing the same run of lodes, there can be no doubt but that when developed they will open up a productive and good property. The engine and pitwork are in good order, and working at an easy cost.

EAST GUNNISLAKE AND SOUTH BEDFORD UNITED.—J. Bray, Jan. 16: We are not yet through the capels of the lode in the 54, but the end continues to let out water very freely, and is still spare for progress. The water is now drained to within 2 ft. of the bottom of the 46, and I hope the sink under that level will also be dry in a few days. The 36 fm. level cross-cut south is letting out a little water, from which indication I have hopes that we are not far from the lode at this point. The lode in the shallow adit continues large, and is at present looking very kindly for improvement. There is no change in the rise since last week; the lode is still producing saving work.

EAST LAXEY.—W. H. Rowe, Jan. 14: I find the lode in the 20 fm. level end to-day rather smaller, and the ground not so open; lode nearly 2 ft. wide, but yielding fair stones of copper ore. I have set the end for another month, at 13*l*. 10*s*. per fm., to three miners and three labourers.

EAST ROSEWARNE.—C. Glasson, Jan. 16: In King's shaft, sinking below the 105, the lode is a little disordered by a slide; it is 10 in. wide, worth 8*l*. per fathom. There is no change to notice in the 105, west of shaft, since my last report. In the 105, east of shaft, the lode is 12 in. wide, worth 6*l*. per fm. In the 95, east of shaft, the lode is not looking so well; the lode is 6 in. wide, worth 3*l*. per fm. In the 95, west of shaft, the lode is 10 in. wide, worth 6*l*. per fm. In the 85, west of shaft, the lode is 10 in. wide, worth 7*l*. per fm.

EAST SNAEFELL.—W. H. Rowe, Jan. 14: Our not having yet cut through the lode at the new shaft, and the water getting altogether too heavy to draw, I have determined, after due consideration, to transfer the pumps at once from the old to the new shaft, which is now deep enough to thoroughly drain the 15. By this arrangement it is immaterial whether we get to the footwall of the lode soon or not; and I shall be able to fix the standing-lift still deeper, and in the best position, at the proper time. I expect to have the lift in the new shaft by the end of the week. The rise above the 15 is now getting into the ore ground; and the 15, from new shaft, appears close upon orey ground also.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 11: The lode in the engine-shaft, sinking below the 110, is 18 in. wide, containing a little tin and copper ore, embedded in quartz, prian, and flookan. The lode in the 110, west from the engine-shaft, is 2½ ft. wide, worth 1½ to 2 tons of copper ore per fm., and good work for tin; we have not a doubt of finding a bunch of ore in this level, and which may be met with any hour. This end is draining the winze in the 95, which we hope to resume sinking in about a week. The stopes in the 95 west have improved, now worth 3 tons of ore per fm.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 15: The men are making good progress with the sinking of the engine-shaft below the 110 fm. level; the lode is 18 inches wide, containing good stones of copper ore and a little tin—a highly mineralised lode. The lode in the 110 fathom level west is 2½ feet wide, composed of quartz and peach, with good black and grey ore, worth from 1½ to 2 tons of ore per fathom, and the ore is of a better quality; here the lode is of much the same character as that in the winze, hence we are sanguine of an improvement. The stope in the 95 fm. level west is worth about 3 tons of copper ore per fathom. All the other places are looking much the same as when last reported.

EAST WHEAL LOVELL.—R. Quentrall, Jan. 15: North Lode: We are driving west in the 60 fm. level in a lode worth from 30*l*. to 40*l*. per fm. The stope in the back of the 45 is worth 20*l*. per fm.—South Lode: The stope below the 40 is worth 40*l*. per fm., and the stope in the back 20*l*. per fm. We have suspended the winze below the 40 for a few days, to enable us to communicate with the north lode in the 45. The lode in the winze is worth 100*l*. per fm.

EAST WHEAL RUSSELL.—Wm. Richards, Jan. 13: The new, or north lode, has been cut into about 2 ft. in the cross-cut in the 66, west of Doidge's winze, but no north wall seen yet; it contains stones of yellow copper ore, friable quartz, peach, prian, and mundic; a kindly lode, and speedy for progress.

— Wm. Richards, Jan. 14: The lode in the winze in the 66 is 4½ ft. wide, and it will yield at this time 36*l*. worth of ore per fm. In the cross-cut north in the 66, west of Doidge's winze, we have not yet cut through the lode. The prospects are encouraging here. I will write more fully to-morrow.

— W. Richards, Jan. 15: The ground in the cross-cut north in the 88 west of Homersham's shaft, and in the cross-cut east of said shaft, is favourable for progress. We have cut through the new or north lode in the 16, and find it to be 3 feet wide, containing peach, capel, quartz, prian, and copper ore. We shall continue it further north to see whether there is any more lode in that direction. I am glad to say the lode in the deepest point reached in the winze, in the 66, is 4½ feet wide, and it will produce at the present time fully 6 tons, or 36*l*. worth of ore per fathom. The shaftmen are employed taking out old and putting in new timber in Hitching's shaft, and attending to the pitwork, &c. We expect the new air-pump in a day or so.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, Jan. 15: The west lode, in the 145 north, is 2½ ft. wide, consisting of friable quartz, white iron, interspersed with lead ore, and accompanied by ground of the most favourable description, both for the production of lead ore in large quantities, and raptd progression. The stope in the back of this level, on the east lode, is producing 12 cwts. of lead ore per fathom. The west lode, in the 130 north, is at present small, and unproductive of lead ore to value. The 115 cross-cut east has reached a change of ground, which is hard, wet, and troublesome, being, we consider, the caples of a lode. The two stopes in the back of the 100 fm. level, on the west lode, are each yielding ½ ton of lead ore per fathom. The high stope in the back of the 84 has become unproductive of lead to value in going above the 72 im. level, and is now suspended. The lode in the winze sinking in the bottom of the 45, north from engine-sqaft, has improved, and will now yield ¾ ton of lead ore per fathom. The winze is now down 7 fms., and the lode appears to be improving as it goes down. There is no other change in the tutwork operations. The tribute department is much the same as last reported.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Jan. 11: The ground in the 70 cross-cut is improving for progress, and fine stones of ore are being met with in the south capels, which indicates our getting nearer the main part of the lode. The lode in the winze sinking below the 60 fm. level is 6 ft. wide, principally composed of spar, intermixed with good quality yellow copper ore, to the amount of 3 tons per fm. The lode in the 60 east is worth 3 tons of ore per fm. The lode in the stopes in the back of this level, west of winze, is improving, worth 4 tons of ore per fm. The lode in the stopes in the bottom of the 50 fm. level, east of winze, is worth from 3 to 4 tons of ore per fm. The lode in the 50, west from Moor's, is worth 3 tons of ore per fm. No. 1 and 2 stopes, in the back of this level, are worth respectively 3 tons of ore per fm. No. 1 and 2 stopes, in the back of the 50, west from old sump, are worth from 3 to 5 tons of ore per fm. The lode in the stopes in the back of the 36 fm. level west is worth 4 tons of ore per fm. All other points of operation are without change since our last.

GREAT LAXEY.—R. Rowe, Jan, 14: The main engine-shaft is now under way sinking below the 220 fm. level. We have no alteration in the 220 north since our last report, other than that the ground has become easier for driving; the lode fully maintaining its value of 50*l*. per fathom. In the 210 we are able to make good progress in driving, but the lode at present is small, and only worth about 10*l*. per fathom. The lode in the 200 fm. level end is gradually improving, now 2 ft. wide, and may be valued at 12*l*. per fathom. In the 190 we are cutting the lode to the hanging-side, where, so far, the most productie part appears to be standing, but at present we are unable safely to state its value. The sump behind the 190 fm. level end continues to improve, now worth 50*l*. per fathom. In the 180 we are cutting through the lode, which appears to be large, and until the last day or two has been poor, but we are now coming to some lead and blende on the eastern side, which, I expect, will lead to something good by next report. In taking down the hanging-side of the lode in the 165, the part we are carrying is 5 ft. wide, worth 60*l*. per fathom. The stopes in the roof and sole of this level are worth from 30*l*. to 150*l*. per fathom. At the 155 we have been taking off the side of the level about 4 fms. behind the present end, where the lode is now worth 80*l*. per fathom. There is no change of importance in the 145 fm. level.—Dumbell's: The engine-shaft is satisfactorily sinking below the 125 in a large lode, but not at present so productive as it was immediately above. The lode in the 125 is in the end driving north 4 ft., worth about 3 tons of lead and 5 tons of blende per fathom; and in the south end it is worth 1 ton of lead and 4 tons of blende per fathom. In the 110 the lode in driving during the past fortnight fell away considerably both in size and value, but I am happy to say it has again improved, and is now worth 60*l*. per fathom. The stopes in the roof of the 110 are, with the exception of the three principal ones northward, falling off in value as they advance upwards; and, although we have a considerable quantity of ore ground above this point in Dumbell's, yet we have long known that it is not so rich as that found below; our great purpose is, therefore, to sink the shaft as rapidly as possible so as to increase on the ore ground in our deeper workings.—South Ground: The stopes in the roof of the 190 continue good for copper, worth about 50*l*. per fathom. In the 165 they are not so productive as formerly. In the 100 fm. level roof we have stopes worth 70*l*. per fathom for lead and blende. In the 60 the sump sinking below the level is worth 80*l*. per fathom, and in the rise by the south slide 60*l*. per fathom. In driving the 60 we have just found the lode to the south of the slide referred to above, and tapped a very heavy feed of water, which will drain the corner shaft, already down to the depth of this level, and with which, I expect, we are now in a fair way for effecting a communication. At Glenroy we hope to resume sinking below the 24 by the first week in February. In cutting lodge and driving the 24 south for a short distance, the lode is about 4 ft. wide, with a mixture of lead, blende, and copper; but every present feature bespeaks the necessity of greater depth for a more settled and productive lode.

GREAT MONA.—J. Trewin, Jan. 13: The Ballaglas engine-shaft is down 10 fathoms 1 foot below the 23 or bottom level; the lode has been large, regular, and well-defined, with very nice specimens of blende, lead, and copper, and has presented a very promising appearance, especially for such a shallow depth; but for some little distance it was disordered by a cross branch, and did not look altogether so promising; however, I am glad now to say the cross branch is disappearing, and the lode is again resuming its former good appearance. The stratum in which it is embedded is of the most highly mineralised character, and I have no doubt on my mind but that it will turn out to be a first-class mine continues as at present, and no unforeseen accident occurs, I expect the shaft in depth. The sinking is being pushed on as fast as possible, and if the ground will be down for a 38 fathom level in or about 14 or 15 weeks from this time; but, should it get easier, it will be done sooner. The machinery, both at the surface and underground, continues to work well.

GREAT NORTH DOWNS.—Wm. Rich, C. Bawden, Jan. 15: The 74, west of Sleggan's shaft, is worth 10*l*. per fathom. The stopes in the back of this level are worth 20*l*., 25*l*., 15*l*., and 8*l*. per fathom respectively. The 59, west of Sleggan's, has this day been communicated by means of a borer-hole with the end, east from Butler's. The 54, west of Butler's, is worth 6*l*. per fathom; the stope in the back of this level is worth 8*l*. per fathom. The 64 west carries stones of ore; the same level east is worth 15*l*. per fathom. The stope in the back of the 64 is worth 12*l*. per fathom. There is nothing very new to report on in the shaft. We sold yesterday tinstone to the amount of 238*l*. 6*s*.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Jan. 11: No. 1 Lode: There is no change in the lode in the shaft sinking below the 20, or in the 20 north since our last advice; but the lode in the 20 south has improved; it is 18 in. wide, and worth 4 cwts. of silver-lead to the fm., which is embedded in sugary spar.—No 2 Lode: The lode in the engine-shaft, sinking below the 30, is 2 ft. wide, producing iron and friable quartz with good lumps of lead, altogether a most promising lode. The lode in the 30 north, is fully 2 ft. wide of sugary spar and soft white iron, worth fully 6 cwts. of silver-lead to the fathom; we have to-day broken lead from this place in which we have seen native silver; we consider this to be a most promising lode, and we believe from the indications this lode is presenting that we are going over a bunch of lead. The lode in the 30 south is 1 ft. wide, and looking a little more promising. The lode in the back of this level will produce 12 cwts. of silver-lead to the fathom.

— G. R. Odgers, J. Harris, Jan. 15: No. 1 Lode: The lode in the engine-shaft, sinking below the 20 fm. level, is 2 to 3 ft. wide, composed of branches of spar and white iron, with stones of silver-lead. The lode in the 20 south is 1 ft. wide, composed of quartz and good silver-lead, worth 5 cwts. per fm. The lode in the 20 north is 18 in. wide, composed of quartz and stones of lead, letting out a great deal of water.—No. 2 Lode: The lode in the engine-shaft is 2½ ft. wide, composed of quartz and white iron, containing good patches of lead, probably worth 2 to 3 cwts. per fm. The lode in the 30 south is 15 in. wide, composed of quarts and white iron, with occasional stones of silver-lead. The back over this level will produce from 12 to 15 cwts. of silver-lead per fm. The lode in the 30 north is 18 in. wide, and worth 5 cwts. of silver-lead per fm., in which we find native and ruby silver. The stope above this level is worth 6 cwts. per fm. The lode in the 20 south is 1 ft. wide, principally iron, but after driving (say) 2 fms. further we are likely to get into a better channel of ground, when an improvement may be calculated upon. The lode in the 20 north is presenting a much better appearance, and we shall be disappointed if we have not a discovery to announce here shortly. The stope above this place is looking very well, worth to-day fully 7 cwts. of silver-lead per fm. The mine, on the whole, is looking as well as we have seen it for some time.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, Jan. 10: The sumpmen will complete the fork to-night, and will then have to put in some extra timber, as the ground is getting very heavy at the south side of the shaft. The men are making better progress in driving the 50 cross-cut north. The lode in the 30 west has a good appearance for lead, and we see spots of lead in the stuff now being broken. The lode in the 20 east is composed chiefly of flookan and killas.

GREAT SOUTH TOLGUS.—John Daw, Jan. 15: Friday last was setting-day. We set the 166 to drive east of Lyle's shaft by four men, at 6*l*. 10*s*. per fathom. In the 154, east of new shaft, the lode is 1 ft. wide, producing good stones of ore; set to four men, at 6*l*. per fathom. In Noel's shaft, sinking below the 140, the lode will produce 2 tons of ore per fathom; set to nine men, at 16*l*. per fathom. In the last 3 ft. sunk the lode has been disordered, but at this time it is more settled, and is improving. Since the 140, west of Noel's, has been holed to the 140, east of new shaft, we have done away with 10 fms. of drawing-lift in Noel's shaft, and sent the water to the engine through the 140, instead of the 125, as formerly. We have set two winzes to sink in the bottom of the 140, west of Noel's shaft, by four men in each, at 4*l*. 10*s*. per fathom. The lode in each winze will produce 2 tons of ore per fathom. In the 140 east the lode is 1 ft. wide, composed of spar, peach, and good stones of ore, and I think it will improve shortly; set to four men, at 3*l*. 10*s*. per fathom. In the winze sinking below the 140, and east of shaft, the lode will produce 2 tons of ore per fathom; set to four men, at 5*l*. per fathom. We set the 125 to drive east of Noel's shaft to two men, at 3*l*. 5*s*. per fathom.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, Jan. 11: In the 75 cross-cut south of Hill Brothers engine-shaft, the ground is very spare for driving. The last day or two we have met with larger heads crossing the end, insomuch that we hope a change at this point will take place shortly. The 75, driving west on the lead lode, the ground is very easy for excavation, the end being in a decomposed elvan. Good progress is being made at this point, and the lode still looking kindly, and indicating a change for the better.

GREAT WHEAL FORTUNE.—J. George, Jan. 16: Hoskins's shaft is sunk to the 150, and the driving east and west on the lode will be at once commenced. The lode in the 140, driving east, is 5 ft. wide, improved in its general character, and producing a little tin. The lode in the 140, driving west, is still looking exceedingly promising, and producing stones of tin, but not yet sufficient to value. The lode in the stopes in back of the 126, east and west of winze, is worth 40*l*. per fathom. We have commenced to sink a winze below the 90, about 20 fms. east of Hoskins's shaft; the lode here has improved, now worth from 10*l*. to 12*l*. per fathom. This is important, as it is altogether in whole ground; there is no level driven east below this place.

GWYDYR PARK.—Wm. Smyth, Jan. 14: There is no particular change in Gwyn Llifion deep adit since last report; the lode is still small, and the end wet. In Gwydyr, driving west, we have intersected another cross branch, composed of spar, mundic, blende, and some spots of lead ore. I think this is part of the Fuchester lode, therefore I put the men to break into the footwall to prove it.

HARWOOD.—J. Race, Jan. 10: There is no particular alteration in the end of the level going north at Scarhead. The stopes in the back of the drift east, in north string, are looking well to-day, worth 16 cwts. of ore per fathom. The side in south branch is worth about 12 cwts. of ore per fathom, at present. We have got through another run in the old level, and are in open ground again. I cannot say how far it is open as yet, on account of the water not being all out, but it appears we shall have mostly open ground now, with small runs at times. There is no circulation of air yet. We have about 15 tons of ore dressed and on the floors, and about 5 tons more broken in the mine.

LOVELL CONSOLS.—Wm. Chappell, Jan. 16: We have this morning taken down the lode at new shaft, which is 2 ft. wide, worth 10*l*. per fathom, with every indication of further improvement. We are making the alteration for laying down the surface rods from engine to new shaft.

MINERA UNION.—W. T. Harris, Jan. 16: Low's Shaft: The lode yield a little lead, and is of a very promising character.—Douglas's Shaft: The lode in the 60 level north is still composed of shale; but I am expecting to get through it into more promising ground very shortly. The pitch in bottom of this level is worth 10 cwts. of lead per fathom. The pitch in back of the 80 yard level south is worth 10 cwts. of lead per fathom. The pitch in bottom of this level is worth 8 cwts. of lead per fathom.—Williams's Shaft: The 40 yard level, on Cae-pant lode, is improving, and now worth 10 cwts. of lead per fathom; the lode in the back is worth 5 cwts. of lead per fathom, in easy ground. The pitch in bottom of this level, on caunter lode, is worth 10 cwts. of lead per fathom.

MOUNT PLEASANT.—W. Wasley, Jan. 16: Last Saturday I set eight men to divide Jenkins's shaft from the 90 yard level to the bottom, to finish putting in the ladders, and to cut lode, at per lump bargain, for 4*l*. 10*s*. The shaft is 27 yards below the 90 yard level, and the men will, after they complete the above work, sink on for the month, or until stopped, at 40*s*. per yard. The men are to pay all costs for drawing, &c., as before.

NETHER HEARTH.—W. Vipond, Jan. 11: We continue very much as usual, both in the Harriett and Henry vein east. I expect we are now through the worst part of the cross-cut to high vein; 10 or 11 fms. more will bring us to it.

NEW CROW HILL.—W. Trelease, Jan. 14: On Saturday last the following was our setting:—The cross-cut from the 70 east towards the new winze from the 55 measured 3 fms. 3 ft. 9 in., including 6 ft. driven through the lode, and 1 fm. 2 ft. 9 in. was driven on the lode by the same pare; the lode here is a mixture of all sorts, with a little ore in it, but not to value. This end is now suspended, and preparations are being made to sink below the 70, which we shall push on with the least possible delay; the men here are now cutting winze-plat, and have 5*l*. 10*s*. to complete the job. The cross-cut from the near winze to meet that from the 70 fm. level end 2 fms. 1 ft., at which point the communication took place between the two cross-cuts. The half-way level in the old winze is 5 ft. 8 in., and is re-set for the month to three men and three boys, at 3*l*. per fm.; lode here 3 ft. wide, with fine stones of ore intermixed. No. 1 stope is 5 fms. 1 ft. 8 in., and is re-set to six men for the month, at 4*l*. per ton for ore, and 20*s*. per fm. for the ground; lode here much improved in the last week, and is worth to-day in places 40*l*. per fm., hence the reason of 30*s*. per fm. being taken off the tutwork in this stope. No. 2 is 5 fms. 0 ft. 6 in., and is re-set to six men, for the month, at 4*l*. per ton for ore, and 20*s*. for the ground; lode here rather less orey than last week, though still worth here and there 25*l*. per fm.; the reason for taking off 30*s*. per fm. here also is on account of the improvement in No. 1, as the men are all obliged to concern together, on account of the impossibility of separating their ore underground and to grass. The cross-cut south in the 22 is 4 ft. 3 in., and is re-set to three men and three boys, for the month, or cut the lode, at 4*l*. per fm.; this cross-cut is here in the old mine.—Wheal Louisa: The east end here measured 4 fms. 2 ft. 6 in., and is re-set to three men and three boys until we are prepared to remove the men back about the shaft, at 4*l*. per fm.; lode here still very promising, and continues to produce magnificent stones of lead ore. The cross-cut in the west end is 15 ft., and is re-set to three men and three boys, stented as above, at 4*l*. per fm. It is all lode for the 15 ft. driven through here, with a little ore disseminated throughout the whole drivage, and good stones occasionally. We have been hindered a good deal with the frost in the dressing, but if no more lets ensue I think we are still right for 200*l*. worth of lead next sampling.

NEW PEMBROKE.—F. Puckey, J. Puckey, Jan 13: At the 75, we have driven east of the cross-cut 2½ fms. and west 3 fms., on the course of the lode referred to in our last report. The lode east of the cross-cut is 2 ft. wide, and of a very promising character, composed of quartz, peach, and white iron, and in places producing good work for tin, worth 10*l*. per fathom. The lode in the present end, west of the cross-cut, has made a splice, and is now 1 ft. wide, producing saving work for tin; but it is again increasing in size, and looking very promising for improvement after passing through the splice. The lode at this level is letting out but very little water, and from its underlie, taking the base from the levels above, we consider the main lode is 4 fms. still further north, which we expect to intersect by the end of the present month. The lode in the stope in the back of the 60, west of the engine-shaft, is 3 ft. wide, and worth for tin 9*l*. per fathom. We are urging on the driving of four cross-cuts at different levels on speculation, and the ground in each end is easy for exploring.

NEW TRELEIGH.—S. Michell, Jan. 15: The lode in the winze below the 70, west of the new shaft, continues good; at the present time it will turn out 4 tons of ore per fathom, but the water is too powerful for manual strength to make satisfactory progress. The lode in the end in this level is 3 ft. wide, chiefly composed of capel, with very good stones of ore interspersed; and, judging from appearances, there is reason to believe that a further improvement will shortly take place. I would remark that no capel has been seen since our first meeting with the slide in the 50 before now, and in my opinion is the main feeder of ore on this lode. Some other method must be adopted to work this ore ground in the bottom of the 70, and the speediest plan to drain the ground will be to sink the new shaft, which I hope we shall be instructed to do at once. The ground in the 20, west of Nicholson's shaft, is spare for driving; no lode has been taken down for the week past, but we hope to do so in the course of a few days, when we shall ascertain its value. The lode in the winze sinking below the 10, west of the shaft, is looking just the same as for some time past; it will turn out about 30 cwts. of ore per fm.

NEW WHEAL LOVELL.—C. Bawden, J. Priske, Jan. 15: The lode in the 62, east of Hill's engine-shaft, is 6 ft. wide, and worth 20*l*. per fathom; this end has been gradually improving for the last 3 fms. driven. The sinking of Colonel's shaft progresses favourably, and I hope to see the lode 15 fms. deep by the end of the month. The other tutwork bargains are without any material alteration. We have eight heads of stamps at work, turning out a fair amount of tin.

NEW WHEAL TOWAN.—Richard Pryor, Jan. 15: The lode in the adit level, driving west, is 18 in. wide, composed of mundic, peach, spar, and good stones of yellow copper ore; within the last 6 feet driving we met with a north and south branch, which has heaved the lode a little north, to the west of which the lode has a better appearance. The end is set again to four men, at 6*l*. 5*s*. per fathom, and is being pushed on to reach the deep adit cross-cut.

NORTH JANE.—James Rowe, Jan. 14: Since the last general meeting of shareholders we have driven the 35 fm. level cross-cut through the elvan course, and, up to the present date, 5 fms. beyond it. We have not intersected the lode yet, but my opinion is as strong as ever that the lode is before us, and that we shall intersect it in our cross-cut. My opinion is confirmed by the agent of Wheal Jane, whose written opinion I should be very glad for the shareholders to have. I think it right to state that when we meet with the lode in the cross-cut it will be altogether in our sett eastward; and if it is a good lode we shall very soon be raising tin from it in considerable quantities. I dialled the ground in Wheal Jane three weeks since, and laid it down on our plan; the result of the dialling has confirmed me in the opinion that by driving the cross-cut we shall intersect the lode. I also, by enquiry at Wheal Jane, find that the lode in this mine, at the depth of our cross-cut, is from 8 to 10 fms. south of the elvan—that is, they had to drive from their lode from 8 to 10 fms. north to see the elvan. I am glad to see that they have a good, profitable mine, having paid a 2*l*. dividend yesterday, and their profitable ground is dipping towards our mine. Our cross-cut is driving with a full force (nine men), at 12*l*. 10*s*. per fathom. I am sorry we have not cut the lode. The cross-cut has been much longer than there was any reason to expect. The intersecting of the first elvan in the shaft, and the meeting with a lode which produced some good work for tin directly under it, misled us in our calculations. After opening on the lode a little I did not think

it was Wheal Jane lode, but found it necessary to prove the 35 fm. level cross-cut south, and, after driving 10 ft., quite unexpectedly met with the second elvan, which, from its being so flat, took such a long time to drive through it. In the 15 fm. level cross-cut, north from Northey's shaft, we have put the men to open east on a lode which we intersected; it is 6 ft. wide, and produces rich stones of mundic, and we have two men and two boys driving this end, at 4*l*. per fathom. The engine, &c., is in good order.

NORTH RETALLACK.—George R. Odgers, J. Harris, Jan. 11: We have no change to report on the lode in the 10 north since our last advise. No. 1 boundary shaft is now perfectly dry, and we hope to resume the sinking of it on Monday, where the lode will produce saving work for lead.

— Jan. 15: The lode in No. 1 boundary shaft is 18 in. wide, and producing good stones of silver-lead, saving work; the shaft is perfectly dry, and we shall lose no time in sinking—this is a pleasing feature.

NORTH SHEPHERDS.—J. Evans, Jan. 3: To-day being our pay and setting, the following bargains were taken:—The 50 fm. level to drive west, by four men, at 3*l*. per fm.; the lode here has improved in appearance, and producing a little lead, but not sufficient to value. Rye's shaft is now completed to the 40, and is set to sink 10 fms. 9 ft. long by 5 ft. wide, cased, divided, ladder, rod, and lift fixed complete, by six men and three boys, for 12*l*. 5s.; the lode here is strong, and judging from the shoot of lead driven through a few fathoms east of this shaft, and this shoot dipping west, we have reason to expect in sinking to find that this shoot of lead continues. A pitch in the back of the 30 fm. level, by two men, at 13s. 4d. in 1*l*. One man and one boy to stope the back of the 20. We are busily engaged in fixing rods to pump at Rye's shaft. I am pleased to inform you that I have a strong hope of being successful in this undertaking.

OKEL TOR.—J. Rodda, Jan. 16: The south lode, in the 65 fm. level east, will turn out 4 tons of ore per fathom. In this level west the lode will yield 4½ tons of ore per fathom; and Hele's stope, in the back of the same level, will produce from 5 to 6 tons of ore per fathom. No change to report in any other part of the mine. We are getting on very well towards our next sampling.

OLD GUNNISLAKE.—H. Rickard, Jan. 13: On Saturday last, being our setting-day, the 41, on the middle lode, was set to six men, to enlarge, clear, and secure, at 21s. per fathom; stented 20 fathom, or the month. The 61, on the same lode, by six men, at 21s. per fathom; stented 20 fathoms, or the month. A pitch in the 21, by two men, at 10s. in 1*l*., at 12s. 6d. per unit. All the filling and landing in the mine, by three men, for one month, at 10*l*. The shaftmen are engaged in putting in bearers and cistern in the 81, and hope to-night to put the lift in the cistern. We are preparing the main-rods, which will be put down as quickly as possible from the 61 to the 81, in order to send down a drawing-lift to fork the mine to the bottom, which is 10 fathoms more, and to haul up the castings, &c. We have discovered some whole ground in the back of the 61, on the middle lode, west from Michael's, which I think will pay well for taking away; I have put four men there to prove it. In a few days we shall commence clearing the 71 and 81, on the south, or Green lode, the cross-cuts from the shaft to the lode being in good order. We are pushing everything as fast as possible, in order to get at the bottom levels, where tribute is much enquired after. We have resumed our dressing both for the owners and tributers.

OLD WESTMINSTER.—F. Evans, Jan. 13: We have suspended the driving of the 92 east for the present, and put those men to rise in the roof behind the forebreast, in order to prove a small run of ore passed through by driving; this at times has produced 1 ton per fm., at present worth ¼ ton per fm., and improving. A pitch behind this rise rise is let at 6*l*. per ton; the ore ground which is being thus tested promises to be something good. The men working in the 92 west, as before reported, are now clearing up the workings under the 65 fm. level east, preparatory to bringing the machinery to bear for pumping and winding. No. 1 sump, in the bottom of this level, is down 12 fms. We have set a stope in the east end, which will produce at present 1 ton per fm.; this is not its average value, as it will improve as ir is carried down. No. 2 and 3 sumps further east have been filled with water, and we have, as already referred to, a full party of men clearing them up; this we expect will be accomplished in about a fortnight. Our object after that is done will be to work deeper by means of machinery, which will take some time to do, as we are assured there is excellent ore ground to follow and open out. We have put new main rods in the shaft where required, and otherwise strengthened and repaired the whole; little more need to be done to complete in order to bring our machinery to bear on the eastern ground, and this will be done as quickly as possible. There is a pitch in the roof of the 65 east let at 6*l*. per ton. We should inform you that considerable repairs have been done to the adit level, as well as middle Bog shaft, the timber having given way in several places, letting the water down the mine; and there is still more to do to make it safe, which shall be done as economically as it can be. At Carpenter's shaft we have driven east 8 fms., at a depth of 13¼ fms. from surface; this level will take all the surface water, and allow this shaft to be sunk dry to a considerable depth. The sinking will now be proceeded with, and also the erection of a whim which we have on the mine. We consider this to be an excellent speculation, and to reach the object there remains about 20 fms. more to sink through speedy ground. Had not the water prevented, this would have been attained ere this; however, good progress will now be made. The lead ore now on the mine, already dressed and in preparation, is about 18 tons, and 4 tons of blende, the latter being ready for sale. We calculate to increase this quantity shortly, or as soon as No. 2 and 3 sumps are cleared and got into working order, as this is the run of ore ground which has given such large returns. We are assured, as already stated, there is good lead in those sumps. Everything in the mine goes on satisfactorily, and the prospects for the future are, in our opinion, very cheering.

PRINCE OF WALES.—J. Gifford, W. Gifford, Jan. 14: In the 65 fm. level cross-cut south we have gone through a branch, as seen in the cross-cut above, about 6 in. wide; the ground here has been rather stiff and spare for driving, but it is a little changed for the better. If we have the same distance to drive as in the 55 fm. level cross-cut, which, I think, we have, we expect to cut the lode about the middle of February. In the 55 fm. level cross-cut north there is no change. In the 55 east we are taking down the lode; as far as seen it is worth 50*l*. per fathom. We expect to have it all taken down by mid-day to-morrow. In the 55 fm. level west the lode is worth 18*l*. per fathom. No. 1 stope, in back of the 55 east, east of winze, is worth 20*l*. per fathom. No. 2 stope, east of winze, is worth 20*l*. per fathom. The stope in the back of the 55 east, west of winze, is worth 25*l*. per fathom. In the 45 west the lode at present is very much disordered, and of no value. In the cross-cut north, in the 45 west, there is no change. In the rise in back of the 45 east, against new shaft, is still very hard and spare for driving.

— *Telegram:* Jan. 15: The lode in the 55 east is improved; worth 70*l*. per fm.

— *Telegram:* Jan. 16: The lode in the 55 east is now worth 80*l*. per fathom.

— Letter received Jan. 17: In the 55 east the lode is worth 90*l*. per fathom.

PEDN-AN-DREA UNITED.—Wm. Tregay, J. Thomas, E. Chegwin, Jan. 11: Sump: The 140 west end is worth 15*l*. per fm. The 130 east end is worth 5*l*. per fm. The 130 west end is worth 10*l*. per fathom. The stopes in the back are worth 20*l*. per fm. The 120 west end is worth 15*l*. per fm. The 100 east rise is worth 10*l*. per fm.—Cobbler's: We have taken down a part of the lode in this shaft, which is worth 10*l*. per fm. The other part is gone off further south, and will be more conveniently worked through the 120 cross-cut. This shaft will now be very quickly squared down to the bottom of the 120, and set to sink below that level. The 110 east end is worth 5*l*. per fm. The 110 west rise is worth 14*l*. per fm. The 100 west winze is worth 14*l*. per fm. In the 90 north nothing of importance intersected since last report.

PENHALLS.—S. Bennetts, Jan. 11: In the 60 fm level end east the lode is of a promising character, and contains good tinstuff. The 60 west is poor. The new lode in the 50 west is without any alteration, very little having been broken since last noticed. The rise in the back of this level is not quite so productive as last reported, but the lode in the rise on the east side of the cross-course has improved, which keeps the average just as before. The 50 fm. level west, on the Pink lode, continues to produce a small quantity of tolerably good tinstuff. The 44 fm. level, on the Pink lode, is poor. In the old Pink Mine the bottom level has been cleared south-east 8 to 10 fathoms; the lode in places is large, but so far as seen not very productive. West but very little more can be done towards laying open the high ground there standing until a whim can be got in readiness on a shaft some 40 fathoms to the west of the engine-shaft, which we are getting ready as fast as possible. We find the water has increased here a stroke per minute.

REINNIE LAXEY.—W. H. Rowe, Jan. 14: After measuring and setting at this mine, I have thought it best to increase the force of men at the rise cross-cut to eight instead of six men, taking the two extra men from the shaft, and leaving only the six labourers to keep the sump clear of water. The ground is a little better for driving.

REDMOOR.—T. Taylor, Jan. 16: The ground in the south cross-cut is still very wet, hard, capely, and vughy, and consequently bad for driving. There is no change in the end north. Some men in raising stones for hedging opened on a good looking lode in the western part of our sett, and just in a line with us and Florence. I shall run a few pits on its course.

ROARING WATER.—H. Thomas, Jan. 14: Last Saturday was our pay, measuring, and setting-day. We sunk during the last month 2 fms. 2 ft., making the depth of the shaft 43 fms. 5 ft. 9 in. from surface. The shaft is taken by nine men, at 13*l*. 13s. per fathom, stent the month, or cut the lode; ground much the same as when last reported, very much mineralised, with strong indications of the lode not being far distant. I hope before our next setting-day the lode (Grady's) will be cut.

ROSECLIFF AND TOLCARNE.—R. Pryor, T. Gundry, Jan. 15: We have again set the following bargains:—The 50 cross-cut is driven north of Lindo's engine-shaft 42 fms,, and within the last 6 ft. driving we cut the main part of No. 4 lode, which is 1 ft. wide, composed of mundic, blende, flookan, spar, and spots of lead intermixed. We have set to eight men to drive east and west of cross-cut on this lode, at 3*l*. per fm. for the eastern end, and 3*l*. 10s. per fm. for the western end; in driving 3 or 4 fms. east and west several branches will unite with the main part of the lode, and as each branch contains a little lead, blende, &c., we look for an improvement at the intersection. These two ends should be pushed on with all possible speed, in order to get under the old mine east and west, and also to get under the deposit of lead that has been met with in the 30 fathom level, and which I have every reason to believe will very considerably lengthened, as the great flookan is dipping west very rapidly; this lode has very considerably lessened its underlay from the 30 to the 50, thus making the 50 cross-cut about 41 fms. 3 ft. to reach the same. We also set the 50 fm. level to drive east and west of cross-cut, on No. 3 lode; the lode in the eastern end is 2½ ft. wide, 1 ft. of which we are saving for lead and blende; in fact, the character of the lode is all that can be wished for, with the exception of a course of lead, which, judging from present indications, we ought to meet with shortly; driving by six men, at 3*l*. per fm. The lode in this level, west of cross-cut, is 3 ft. wide, composed of spar, mundic, and spots of lead—a very kindly lode, and is likely to improve as it gets near the great flookan; set to drive by four men, at 2*l*. 5s. per fm.; this lode is 16 fms, south of No. 4 lode in this level. The pay and setting went off very satisfactorily.

ROSEWARNE CONSOLS.—J. Nancarrow, R. Knuckey, Jan. 11:—At our survey to-day the following work was set:—The 80 to drive west, by six men and two boys, at 3*l*. 5s. per fm.; the lode has a good appearance, and contains a little ore. The 70 to drive west, by two men and two boys, at 3*l*. 5s. per fm.; the lode is small. Sarah's shaft to sink below the 30, by six men, at 2*l*. 15s. per fm. This shaft is communicated with the 30; the stope east of shaft is worth 4*l*. per fm. We have also set three pitches on the caunter, by six men, at 13s. 4d. in 1*l*.; one at Ellen's, at 15s. in 1*l*.; and one on tin, by three men, at 15s. in 1*l*. Our prospects on the caunter are improving.

ROSEWARNE UNITED.—T. Richards and Son, E. Carthew, Jan. 16: In the 70 cross-cut, driving north from the boundary shaft, we yesterday cut the north lode, and have commenced driving east on its course. The lode is above 1 foot wide, composed chiefly of quartz, and producing a little mundic and copper ore, and the character of both the lode and the ground looks promising for producing mineral. The lode in the 70, east of boundary shaft, on the middle lode, contains tones of copper ore.

SORTRIDGE CONSOLS.—James Richards, Jan. 16: Hitchins's shaft having reached the required depth, a trip-plat is being cut at the 140, which, together with fixing lift, &c., will occupy four weeks to accomplish, when sinking will be resumed, and forced on as fast as the nature of the work will admit of. In the 140 west the lode continues small, and is composed chiefly of flookan. In the 140 east the lode is large, 4 ft. wide, and wears a most healthy appearance, being composed of capel, quartz, and a good deal of mundic, prian, and saving work of rich copper ore.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, Jan. 11: In the 82 fm. level we have commenced driving east and west of King's shaft, where the lode is large, and consists of ferruginous quartz, throughout which there is native copper disseminated. In the 61 fm. level west we continue to drive in the flookan part of the lode, which is producing tin worth about 5*l*. per fm. We are making good progress in rising and sinking between the 61 and 51 fm. levels, and expect to communicate in the coming week. We shall then have the tin ground laid fairly open for stoping, and shall increase our returns of tin considerably. There appears to be a valuable lode on the south of the winze and rise. In the 51 fm. level west the lode is smaller than it has been. There is nothing worthy of particular notice in the other parts of the mine.

SOUTH DARREN.—J. Boundy, Jan. 11: Owing to the severe frost, the pump-wheel has been idle for some days, consequently nothing has been done in the 70 west during the week. At present the water is up to the roof of the 70; however, to-day I am glad to say there is a favourable change in the weather, and the pumping-wheel is again working. The lode in the 60 west is 3½ ft. wide; present value for lead and copper ore, 23*l*. per fathom, and, judging from its strong and healthy appearance, I am of opinion that we shall go on to lay open a good run of ore ground in this direction. This looks well for the 70, which will be pushed on by six men as fast as the nature of the ground will allow. The lode in the 50 west is still under the influence of the cross-course, and is disordered. The stopes throughout the mine are yielding about their usual quantity of ore. No change of importance in any other point of operation.

SOUTH HERODSFOOT.—W. Goldsworthy, Jan. 16: We are pushing on the sinking as fast as possible. There is no particular change in the ground this week. The engine and pitwork are in good order, and keeping the water comfortably.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 11: The men are making good progress with the sinking of the engine-shaft below the 30, but no lode has been taken down. There is no change in the 30 east. The lode in the 20 east is 2 to 3 ft. wide, of quartz and gossan, with sprigs of copper ore, looking very promising.

ST. IVES WHEAL ALLEN.—J. Nancarrow, J. Daniel, Jan. 15: We have resumed the driving of the 40 east, on the Carbona lode, which has recently been small, but is now worth 4*l*. per fathom, and improving. The lode in Richards's shaft also looks better, and yields tin to save.

ST. JUST AMALGAMATED.—R. Pryor, Wm. White, R. Wearne, Jan. 15: Eastern Mine: The lode in Phillips's engine-shaft, sinking below the 30, is without change to notice. The lode in the 20 east, on Agaworth lode, is improving as it gets out of the influence of the caunter, and is now worth 3*l*. per fathom.—Western Mine: The lode in Saveall's engine-shaft, sinking below the 90, is worth 15*l*. per fathom, and promising for further improvement. The lode in the 90, east from engine-shaft, is worth 6*l*. per fathom. The lode in this level, west of shaft, is also worth 6*l*. per fathom. The lode in the 76 west is worth 8*l*. per fathom.—Owl Lode: The lode in the winze sinking below the 20 fathom level, is worth 6*l*. per fathom. The lode in the 20, north of Reddipper shaft, is worth 4*l*. per fathom. The lode in the 20, south from Saveall's lode, is worth 5*l*. per fathom. The lode in the 10 north is worth 9*l*. per fathom. No change to notice in any other bargains since last report.

STEEPLE ASTON IRON ORE.—J. Argall, Jan. 16: We are going forward very satisfactorily, and daily raising quantities of ore. The bed is still looking well, and improving going towards the hill in depth and quality. I think the last 6 feet we have taken out is above 50 per cent.

TAMAR VALLEY SILVER-LEAD.—J. Goldsworthy, Jan. 16: Our progress in sinking the shaft has not been so rapid this week. The discovery of an elvan course (a most favourable indication) has somewhat retarded our operations; I, however, regard this elvan course as one of the most important features in connection with this property, it being a certain indication of the proximity of a productive lode. The elvan course is a little jointy, which is not quite so favourable for blasting. A great improvement may be expected as soon as we are through the elvan. We have in the deepest point reached fine bunches of silver-lead beetween the lode and elvan.

TREVENEN AND TREMENHEERE.—J. Medlyn, C. George, Jan. 15: The 197 fm. level end is worth 6*l*. per fathom. The stope in this back is worth 10*l*. per fathom. The 187 fm. level end is worth 3*l*. per fathom. The stope in this level is worth 15*l*. per fathom. The 172 fm. level end is worth 15*l*. per fathom. No. 1 stope, in this level, is worth 16*l*. per fathom; No. 2, 30*l*.; and No. 3, 20*l*. per fathom. The stope in the 162 is worth 20*l*. per fathom. The stope in the 150 fm. level is worth 8*l*. per fathom.

VIGRA AND CLOGAU.—W. J. Holman, Jan. 16: By this post I forward you 27 ozs. 10 dwts. 6 grs. of gold. Visible gold has been broken almost daily from the bottom of No. 4 shaft, under No. 2 adit level east, and to-day visible gold can be seen in the solid rock in the extreme bottom of the sink: 15 ozs. of the above quantity of gold was obtained from this shaft during the past week, and from the improved appearance of the lode, and other indications, we may hope for a continuance for some depth. In the cross-cut north from the bottom of No. 5 shaft some small strings of quartz have been met with in the last few feet driving, and the larger branch cannot be far distant. From the stope over the back of No. 1 level, west from No. 1 shaft, some good stamping mineral is now being broken, the width of the lode at this place being 4 ft. The cross-cut south from No. 1 level is being pushed forward, and is without change. In the drivage east from No. 1 shaft the lode maintains a width of 6 ft., and during the past day or two has considerably improved. At the No. 1 and Vigra Mines there is not any change to report. The drainage of the old Clogau Copper Mine is going on well, and the machinery erected for that purpose is working well. An increased supply of water at the reduction works enables us to keep 28 heads of stamps and the amalgamating machinery at work daily. The above quantity of gold has been received at the offices of the company.

WEST CHIVERTON.—J. Julieff, Jan. 15: The 110, east of Hawkes's cross-cut, is worth 40*l*. per fathom. The 100 west, on south part, when last cut through was worth 70*l*. per fathom. The 110 west, on the north part, is worth 10*l*. per fathom. No. 2 winze, sinking below the 100, west of Hawkes's, is worth 50*l*. per fathom. The 100, west of Burgess's, is worth 30*l*. per fathom. The 100, west of No. 1 winze, west of Burgess's, is worth 30*l*. per fathom; on the south part, about 10 fathoms before this end, we have a winze sunk 10 fathoms below the 90—on the north part is a lode worth from 20*l*. to 40*l*. per fathom. The 90, west of Burgess's, on the north part, the lode is large, with stones of lead. The winze sinking below the 80, on the north part, is down 2 fathoms, in a lode worth 25*l*. per per fathom. The 80, east of Burgess's, on the new north part, is worth 8*l*. per fathom. The winze sinking below the 80, on this part, is worth 30*l*. per fathom. The 70, east of Batter's, on the new north part, is worth 8*l*. per fathom. The stopes continue to look well.

WEST GODOLPHIN.—John Pope, jun., Jan. 14: Hope lode, in the 25, driving east of Paull's shaft, is 8 in. wide, yielding a great deal of mundic, and saving work for tin. The lode in the stopes in the back of the 15 is worth about 8*l*. per fathom. The lode in the 8, driving east of Paull's shaft, is small at this time. The stopes in the back of this level are just as for some time past.—New Lode; The lode in the winze sinking below the shallow adit is 3½ feet wide—a fine strong lode, with saving work for tin. The stopes in the back of this level are worth about 5*l*. per fathom.—Caunter Lode: The lode in sinking below the deep adit is looking better than when I reported on it last; at present it is 4 ft. wide, worth 6*l*. or 7*l*. per fathom; but, as we have ground standing in the back of the deep adit of just the same value, and can stope it for less than one-third of the price in the bottom, we have thought it best to suspend stoping the bottom for the present, and put four men to stope the back of the level—two to drive the deep adit level, and two to drive the shallow adit level, south-east of pump shaft. The lode in the footway shaft, and also in the stopes in the bottom of the shallow adit is without change worthy of notice.

WEST GREAT WORK.—S. J. Reed, Jan. 15: We have an improvement for copper in the 30, driving east from flat-rod shaft; the lode is 2 ft. wide, and will produce fully 2 tons per fathom, worth 5*l*. to 6*l*. per ton. Barn shaft continues to look well, the lode in which is 3 feet wide, worth 15*l*. per fathom. Our tut-work bargains and tribute pitches yield the usual quantity of tin.

WEST OKEL TOR.—J. Rodda, Jan. 16: We have met with a strong and kindly-looking lode from 4 to 5 feet wide, consisting of capel, peach, gossan, sulphur, mundic, and spar, with some pretty spots of yellow copper ore in it. Its bearing is 20° south of east, and underlie south about 2 feet in a fathom. We shall continue the costeaning for the purpose or cutting the Tamar Valley silver-lead lode.

WEST PRINCE OF WALES.—J. Gifford, Jan. 14: In the engine-shaft below the adit the lode is 4 feet wide, composed of quartz, flookan, and capel, and the water increasing. In the deep adit, on the south lode, the lode is 2 feet wide, composed principally of flookan. The ground is favourable for driving.

WEST TOLGUS.—Jan. 15: The ground in Taylor's engine-shaft continues favourable for sinking, and we hope to get the shaft deep enough for another level by the end of this month. In the 85 fm. level west the lode is 2 feet wide, consisting of spar, peach, and mundic, and letting out a quantity of water. The lode in the 85 east is 6 feet wide, yielding 6 tons of ore per fm., worth 30*l*. per fm. We have three stopes over the back of the 85 fm. level working by 18 men, each stope worth 14*l*. to 15*l*. per fm. We have holed the winze from the 75 to the 85 fm. level; this has well ventilated the 85. In the 75 fm. level west the lode is 4 feet wide, consisting of spar and good stones of ore—a promising level. We intend next week to put the men that have just holed the winze from the 75 to the 85 to rise in back of the 75 west. We have three stopes over the back of the 75 fm. level working by 18 men, at an average price of 3*l*. 3s. per fm.; two of these stopes are worth 15*l*. per fm., and the other is nearly worked out. The lode in the 65 west is 3 feet wide, worth 8*l*. per fm. In the 50 fm. level west, the lode is 4 feet, producing stones of ore. Our progress in sinking Richards's shaft is slow, in consequence of the shaft being large, and the ground requires to be timbered.

WEST WHEAL TREMAYNE.—S. Roberts, Jan. 14: Yesterday we commenced driving on the south lode, it being disordered and split in several branches against the cross lode, but they are all bearing towards each other, and in a short distance we hope they will form one, and prove productive. We have not cut anything in the north cross-cut as yet. In the 20 end west, on the engine lode, the lode is 10 in. wide, yielding good stones of copper ore. We hope to have an improvement in this end soon, as it will be getting near the great elvan course.

WESTMINSTER.—F. Evans, Jan. 15: No. 1 stope, in bottom of the 70, west of Thompson's shaft, is in an orey lode, and close to shaft will produce 15 cwts. per fm.; but 6 fms. further west it will produce 3 tons per fathom. No. 1 stope, east of said shaft, will produce 1½ ton per fathom. The three stopes in the roof of the 70 east are turning out good quantities of ore, and will average about 2 tons of lead ore per fm. The machinery on the mine is working well, the whole of the water in the mine being managed by the large engine. We are progressing favourably towards the next sampling, which we hope to get up to 70 tons.

WHEAL BULLER.—J. Inch. J. Brown, Jan. 15: Stevens's Shaft: The 92 east, on the south part of the lode, is worth for tin 12*l*. per fathom. The 92, on the north part, is unproductive. In the cross-cut driving north we are nearing the lode; the end is letting out more water. The 80 east is still in elvan—poor. The winze sinking under this level is unproductive. No. 1 stope in the back of this level, is worth 20*l*. per fathom; No. 2, 25*l*. per fathom. In the 70 west the lode has not been taken down since last reported. The 60 driving west, on the north branch, is worth for copper ore 15*l*. per fathom. In driving the cross-cut north at the 50 we have intersected a branch which is worth 7*l*. per fathom for copper ore. We have commenced to drive west on its course,—Hocking's shaft: The 80 east is producing tin, but not to value. The 70 west is worth 8*l*. per fathom. The winze sinking under this level is worth 8*l*. per fathom. The stope in the bottom of the 60, west of Knuckey's winze, is worth 25*l*. per fathom. The stope east of the winze is worth 20*l*. per fathom. The stope in the back of this level is worth 8*l*. per fathom. No other change in the mine to notice.

WHEAL CREBOR.—J. Gifford, Jan. 13: There is no change in any part of the mine since last report. We are getting on well with our dressing, and hope to sample about 90 tons of average quality copper ore at the end of January.

WHEAL EMILY.—J. Rabey, Jan. 16: We are proceeding as fast as possible in taking down the lode at the side of the adit level, and shall have several tons of silver gossan ready for sale at the time stated, in February. The produce will fully enable us to meet our costs, if not to leave a profit. The time of the year is approaching when we shall be able to proceed with erecting the engine, &c., after which the mine, from present appearances, cannot fail to become a first-class property.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Jan. 16: We have not taken down the lode in the 90 west this week, and, therefore, have no change to report. As soon as the lode is taken down you shall be advised as to its appearance, &c. The pitches, on the whole, are looking pretty well.

WHEAL KITTY.—S. Davey, W. Polkinghorne, Jan. 11: The lode in the 82, west of Holgate's shaft, is 4 ft. wide, worth for tin 5*l*. per fathom.—New Shaft: Pryor's Lode: This shaft is sunk 9¼ fms. below the 82, in which sinking we intersected a large gossan, that cast the lode south; we have about 2½ fms. more to complete the contract, by which time we hope the lode will again take its regular course. In the 82, driving east of new shaft, the lode is much the same as when last reported, worth for tin 8*l*. per fm. In the 82, driving west of shaft, the lode is 2 ft. wide, worth for tin 10*l*. per fm. We have communicated the winze in the bottom of the 65 with the 82, which has given good ventilation to both levels. In the 65, driving west of shaft, no lode has been taken up since our last report. The lode in the 44, driving east of shaft, is poor. In the 34, driving west of cross-cut, there is nothing to value. We have resumed the driving of the 24 east of cross-cut, where the lode is producing stones of tin.—Caunter Lode: We have commenced to drive north on this lode in the 82, but have not as yet taken it down.—Vottle Lode: In the 24, driving east of cross-cut, the lode is worth for tin 7*l*. per fm.

WHEAL KITTY (Uny Lelant).—W. Rosewarne, Jan. 16: South Russoe Lode: The lode in the flat-rod shaft, sinking below the 30 fm. level, is worth for the length of the shaft (9 ft.) 20*l*. per fm. The lode in the winze sinking below the 30 east is worth 8*l*. per fm. The lode in the 30 end east is yielding a little tin. The stope in the back of the 30 fm. level east is worth 5*l*. per fm. The stope in the bottom of the 30 west is worth 5*l*. per fm. The lode in the 20 end east is at present disordered by a cross branch.—North Russoe Lode: The lode in the winze sinking below the 150 fm. level is worth for the length of the winze (9 ft.) 6*l*. per fathom. The lode in the 150 fm. level, east of No. 3 winze, is worth 4*l*. per fm. The lode in the 150 fm. level, west of No. 1 winze, is worth 4*l*. per fm. The lode in the 110 fm. level east is worth 2*l*. per fm.—New Lode: The lode in the 140 fm. level, east of the cross-cut, is producing stamping work.—North Gowan Lode: The lode in the 50 fm. level, west of the rise, west of Rogers's shaft, is unproductive. The lode in the winze sinking below the 60 fm. level, west of Rogers's shaft, is improving, now producing saving work. Nothing new in the 150 or 140 fm. level cross-cuts.

WHEAL MARY HUTCHINGS.—W. Edwards, Jan. 16: The lode in the 10 west is about 18 in. wide, producing good work for tin, having improved within the last 6 ft. There are six men in the back of this level, rising to communicate with the winze sinking from the deep adit level, and expect to haul through in about a fortnight. The lode in the end going east in this level is 3 ft. wide, producing saving work for tin. We have about 15 fms. further to drive to intersect the east and west lode, at which point we may calculate good results, judging from the rich course of tin passed through in the level above. The stopes in the back of this level continue to yield very rich work for tin. The lode in the deep adit end east is 18 in. wide, saving work, and giving occasionally very rich stones of tin. The lode in the shallow adit end, going east, is 18 in. wide, carrying a leader of tin about 6 in. wide, exceedingly rich for tin, the remainder part good stamps' work. This level is completed from the stamps to this present end, and railway laid down throughout, which will effect a great saving in carrying stuff to the stamps. The stamping and dressing is progressing most satisfactorily. We commenced calcining on Monday last, and will sample again about the end of the month.

WHEAL SPARNON.—Wm. Tregay, Jan. 11: The lode in the north shaft is large, and produces occasional stones of black and yellow copper ore. The lode in the 15, east of Belfry shaft, produces mundic and stones of copper ore. The lode in the 15 west produces good stones of grey and yellow copper ore, and is promising for improvement.

WHEAL TRELAWNY.—W. Johns, T. Grenfell, J. Pryor, Jan. 15: We have completed the alteration of the pitwork in Smith's engine-shaft; water can now be kept to much greater advantage than heretofore. The lode in the 210, both north and south of this shaft, will average about 2 ft. wide, spotted with ore. The lode in the 196, north of Chippendale's shaft, is still worth 6*l*. per fm. The lode in the winze, sinking in advance of this end below the 182, is worth 12*l*. per fathom. We have effected a communication between the 196 south of Smith's, with the 196 north of Trelawny's, which has caused a perfect ventilation between both the mines, and thus enabled us to set a tribute pitch. The sinking of Trelawny's engine-shaft has been retarded, in consequence of one of our boilers springing a leak; we are now busily engaged in repairing it, and hope to have it all right by the end of the week. In the 210, north of this shaft, we have not taken down the lode since last reported. The 210 south is worth 7*l*. per fathom. We sampled on the 7th inst. 63 tons (computed) of crop silver-lead ore. The masons have completed the building of the new engine-house, which is now in readiness to receive the engine.

WHEAL UNY.—S. Caode, M. Rogers, Jan. 11: The engine-shaft is sinking favourably, and the lode in the shaft is of the same value as last reported—20*l*. per fathom. The 130 fm. level, east of the engine-shaft, is driven to intersect the cross-course, and has let down a quantity of water from the 120. We shall resume driving the 120 east next month; the lode in the end for 6 ft. wide is worth 8*l*. per fm. The 110 fm. level east is worth 8*l*. per fm. Goodinge's shaft is holed to the 100 fm. level, and we shall put the men to stope ground for a plat, and bring down the skip-road, before driving the 100 end, east of shaft.

MINING IN DAKOTA TERRITORY, U.S.

We have been favoured with the following extract from a letter lately received by Colonel Buel, from Mr. H. B. Hubbell, of the Sweet Water Mines, Dakota Territory, U.S.:—

"Our situation is on the head of the Sweet Water, at the extreme south-east termination of the Wind River range of the Rocky Mountains, among the rolling prairie hills of the South Pass. The country in the vicinity of the mines is easy of access, for the accommodation of freight from the great thoroughfare now in process of construction from the States of the East to those of the Pacific Slope, which will make this a desirable locality for the investment of capital; for besides the rich veins of gold and silver with which the country abounds, there are extensive beds of coal, iron, and copper within from 20 to 50 miles, at the east and north-east, which can easily be transported across the country for the accommodation of the mining region, and also for transportation to other localities, where such material may be in demand; or wrought into machinery for the reduction of the ore containing more precious metals, as gold, silver, and cinnabar ores, all of which are found in this locality. The general formation of the mining region is of the mica-slate, through which the gold and silver bearing quartz veins are found at irregular intervals, across a section of country some 20 miles in breadth, and about 40 or 50 miles in length from east to west. The general course of the ledges are about 10° south of west and north of east, and several of the largest ledges have been traced a distance of from two to five miles consecutively, which ground has been preempted and located; and several companies are sinking shafts into their claims and hoisting the ore, anticipating the importation of machinery in the coming summer, of which there will undoubtedly be considerable quantities, as the extent and the extreme richness of the rock ccnnot fail to insure large dividends to the company stockholders, and also to mill owners who may wish to erect machinery for costum work. Speaking of the extreme richness of the rock leads me to give a brief history of our first discovery—the "Carizo Ledge," which Mr. H. S. Reedall and myself discovered on June 8, 1867, at which time dates the first permanent location of gold miners in the South Pass and Sweet Water country. At the time of the first discovery there was but a small company of us, ten in number, with a very limited supply of mining tools, such as picks, shovels, and one small iron mortar, about the size of a pint measure, and with this Lilliputian quartz-mill two of us crushed the rock and amalgamated 40 ozs. of gold dust in a little more than two days, working in the time a little more than one bushel of quartz, and often getting prospects from a single pint of the pulverised ore varying from $5 to $20; and I now have in my possession specimens of the ore, of which at least two-thirds of the entire weight is gold, the gold being of a superior quality, assaying 995·45 parts of pure gold. There have been several thousand dollars taken out of this ledge this summer by hand labour alone, as the hostility of the Sioux Indians, want of capital, and other unforeseen casualties, prevented us from obtaining any machinery.

"The next in richness is the 'Miners' Delight' ledge, from which the company owning it have have taken considerable gold (all by hand labour), but I am unable to say what amount. The rock is exceedingly rich, exhibiting free gold in abundance. It is from this ledge that the large specimen at Wells, Fargo, and Co.'s express office, in Great Salt Lake City, was taken. The ledge known as the 'Atlantic' has been traced and opened at intervals of from 2000 to 3000 feet for a distance of nearly five miles, and prospects very rich, exhibiting free gold in numerous instances; as also does the 'Lone Star State' ledge, the 'Mohammet,' and a great many others, from all of which a large prospect can be obtained with the aid of mortar and pan.

"The facilities for the erection of buildings for reduction works are unsurpassed in any region of the territories of the United States. There is abundance of wood and water, with excellent fall to the streams for water-power, when such is preferred, although the severity of the winters are against employing power of that kind, as there would be a large portion of the year that it would be impossible to accomplish satisfactory results: and the advantage of importing steam-power machinery into the country by way of the Union Pacific Railroad, which I have been assured by Major-General Dodge, chief superintendent of the location of the road, will reach within 50 or 60 miles of this place the incoming summer, and from which point the country is quite level and uniform, and well adapted to wagoning across heavy machinery, such as necessary for the working of quartz rock. The quartz of this section of the country is very free from those base metals, such as galena, plumbago, arsenic, bismuth, &c., which greatly enhances the value of these mines, as there can be quite a saving in the machinery necessary for the reduction of the more precious metals. There are other inducements than mining in this section of the country. There are fine farming localities about 24 miles from here, in a northerly direction, where the agriculturist can find rich loamy soil, and broad verdant valleys of luxuriant grasses, where his barn can be filled with good hay for the market, or for team uses, as none is required for unemployed stock, for they can procure a livelihood at all seasons of the year by grazing. Wind River Valley (the place I speak of) is about 100 miles in breadth, by 150 miles in length, and is watered by the Great and Little Wind River, the Large and Small Pupanzie Beaver Creek, and a host of other lesser streams, containing plenty of water for irrigating purposes, and other necessary uses."

In Berlin there is some fear to a temporary failure of coal, as the merchants had not laid in a sufficient supply, and it is just possible that some of the manufactories may have to stop work for want of steam power.

Projected New Companies.

LINCOLN GOLD COMPANY, 160,000*l.*, in 80,000 shares, of 2*l.* each.—The acquiring of the gold mines called the "Harpending and Quarry Gold Mines," situate in the township of Lincoln, Placer county, California, with the lands connected therewith; the acquiring of any adjoining concessions; the working and developing such mines; the preparation, manufacture, smelting, and sale of ore, metals, or minerals in any state, raised from such mines. The purchase of the business of, or the amalgamation with, any individual or individuals working mines or minerals in California, &c. The Memorandum is signed by—ADOLPHUS W. YOUNG, 14, Pall Mall, gentleman, 1; EDMUND W. WINGROVE, South End House, Twickenham, gentleman, 1; WILLIAM R. A. BOYLE, 14, Old Square, Lincoln's Inn, barrister-at-law, 1; J. WALTER LUKIS, Woodlands, Isleworth, gentleman, 1; ALFRED T. THOMSON, 49, Gloucester-terrace, Hyde-park, London, 1; T. STAUNTON, 11, Porchester-square, Hyde-park, London, 1; H. R. TREHERN, 23, Clifton Villas, Maida-hill West, 1. The number of directors forming the board of management in England shall not at any time be less than five or more than nine. The subscribers to the Memorandum of Association shall be the first directors. Qualification, 250 A shares in the capital of this company for his own sole use and benefit, upon which all calls shall then have been paid, and be resident in England. The directors shall be entitled to receive amongst them out of the profits of the said company, and as part of the expenses of the management thereof, a sum equivalent to 100*l.* per annum for each director, and 200*l.* per annum for the Chairman; and, in case the dividends declared on the shares of the said company shall in any one year be not less than 30*l.* per cent. on the nominal amount of such shares, the directors shall be entitled to receive, as aforesaid, a sum equivalent to 150*l.* for each director, and a sum of 250*l.* for the Chairman, for their services during such years; and in case the dividends in like manner declared shall in any year amount to, or exceed, 40*l.* per cent. on the nominal value of such share the directors shall be entitled to receive, as aforesaid, a sum equivalent to 200*l.* for each director, and a sum of 300*l.* for the Chairman, as a remuneration for their services during the last-mentioned years, and such sums so appropriated shall be divided amongst the directors and Chairman in such manner, and in such proportions, as the board shall from time to time determine.

AUSTRALIAN GOLD.—The deliveries of Australian gold month by month in the first 11 months of last year, compared as follows with the imports effected into the United Kingdom in the corresponding months of 1866 and 1865:—January, 451,910*l.*, against 279,260*l.* and 163,572*l.*; February, 131,619*l.*, against 417,208*l.* and 194,876*l.*; March, 584,621*l.*, against 612,710*l.* and 174,584*l.*; April, 398,173*l.*, against 445,882*l.* and 261,332*l.*; May, 425,454*l.*, against 424,865*l.* and 358,488*l.*; June, 294,972*l.*, against 436,541*l.* and 136,256*l.*; July, 413,524*l.*, against 690,514*l.* and 122,653*l.*; August, 577,340*l.*, against 654,614*l.* and 504,915*l.*; September, 586,357*l.*, against 686,777*l.* and 238,556*l.*; October, 904,741*l.*, against 983,862*l.* and 946,865*l.*; and November, 522,303*l.*, against 608,379*l.* and 1,174,031*l.* The total imports to Nov. 30 last year were thus 5,291,014*l.*, against 6,231,612*l.* in the corresponding period of 1866, and 4,276,128*l.* in the corresponding period of 1865. In the whole of 1866 the value of the Australian gold imported into the United Kingdom was computed at 6,839,674*l.*; in the whole of 1865, 5,051,170*l.*; in the whole of 1864, 2,656,971*l.*; in the whole of 1863, 5,995,368*l.*; in the whole of 1862, 6,704,753*l.*; in the whole of 1861, 6,331,225*l.*; and in the whole of 1860, 6,719,000*l.* After all, then, last year's receipts of gold from Australia were not at all excessive.

GOLD IN NOVA SCOTIA.—The extraction of gold from the ores of Nova Scotia continues to make very satisfactory progress. Sherbrooke again leads, and no doubt is now entertained as to the extraordinary richness of the mines. More than 3052 ounces of the precious metal was extracted in the three months ending September, representing a value of 12,200*l.*; the average number of men employed during the time being 102. The aggregate yield for the four quarters of the year ending September, 1867, was:—December, 7086 ozs. 15 dwts. 5 grs.; March, 5390 ozs. 1 dwt. 18 grs.; June, 7502 ozs. 19 dwts. 21 grs.; and September, 7583 ozs. 9 dwts. 10 grs.=27,563 ozs. 6 dwts. 9 grs. The total for the year ending September, 1866, was 24,162 ozs. 4 dwts. 11 grs., and the total for the quarter ending September, 1866, was 7184 ozs. 4 dwts. 16 grs. It will be seen that during the year reported upon considerably more than 100,000*l.* sterling worth has been taken from the gold mines of the province.

PETROLEUM AS STEAM FUEL.—Mr. C. J. RICHARDSON is still indefatigable in his efforts to make the burning as steam fuel of shale oil, creosote, and petroleum a commercial success; and now expresses the utmost confidence that in his next trials he will be able to prove that he was fully justified in all the promises he made. He is satisfied that naphthaline, black grease, and the heavy residuum will be conquered in time, but in his next trial he means to confine himself to heavy crude shale and coal oil, creosote, and American petroleum. He mentions that the Woolwich process is the only one for using petroleum as steam fuel that has been submitted to be overhauled, examined, and reported on by the Government engineer; and it is the only one, either in England and America, that has had tabulated reports published of its working—reports made by the Government engineer, without any participation with himself. These reports were published, by order of the House of Commons, in August, 1866, in a Blue Book, entitled "Petroleum and Shale Oil." Mr. RICHARDSON estimates from the Woolwich exreriments that, in real practice, the evaporative power of oil and creosote, as compared with coal, will be as 14 to 6. He observes that "It is a vexed question about the mercantile value of the oil for fuel above coal—figures can be made to prove the advantage of either. It is certain that the oil is more generally diffused about the globe than coal. Either the oil or creosote can be procured anywhere; the use of them for fuel would stop a large exportation of coal from this country. For far-going sea steamers, coal freight is very expensive. Our Government paid last July from 5*l.* to 6*l.* per ton freight by steamer for coal for our Abyssinian squadron. For our ironclads, and, indeed, every ironclad, when the oil is rendered available, it will at once be adopted."

NEW PROCESS FOR UTILISING THE IRISH BOGS.—In these unhappy days for our Sister Isle, it is pleasant to hear of any plan by which her abundant resources may be developed and rendered fruitful. How to utilise the bogs of Ireland has long been a problem which many scientific men have endeavoured to solve; for, apart from the fame that would attach to any person who succeeded, the utilisation of these vast fuel fields is a subject of great national importance. According to a report lately laid before the annual meeting of the Institution of Civil Engineers in Ireland, a successful effort has at length been made to manufacture a superior fuel from peat. The inventor of the new process is Mr. C. Hodgson, who, according to the President of the above institution, has not only attained to mechanical perfection in his mode of treating peat, but has also laid the foundation of a sound commercial undertaking, which only requires capital to be successfully worked. Hitherto, the great difficulty in making peat available for fuel is getting rid of the large quantity of water it contains. Mr. Hodgson's plan of drying is, happily, exactly suited to the vicissitudes of a climate like that of Ireland; and, though novel, is at once easy and simple. The principal features of Mr. Hodgson's invention may be thus summed up:—He uses a tube of iron, 5 ft. long and 4 in. in internal diameter, at one end of which a hydraulic ram works. The tube is filled with the peat to be operated upon, and at each stroke of the ram a cake 1 inch thick is produced, the peat in the tube being at the same time pushed forward 1 inch; and as each cake requires about one minute to traverse the length of the tube, there are 60 cakes produced in that time. Indeed, numerous experiments show that a tube of this description, worked by a ram, will produce 100 tons of compressed peat weekly. But in order to make the peat serviceable for fuel, it is necessary that the tube should be supplied with dry turf. This is obtained by using the upper surface of the bog, which, after being exposed for a few hours on a fine day to the atmosphere, is raked slowly over iron plates, heated only by the waste steam of the compressing machine. By this treatment the turf is rendered sufficiently dry to face the tubes, and it has been ascertained that by the combustion of 25 tons of compressed fuel, power and heat enough can be obtained to dry and compress 75 tons of excellent peat for fuel. It has further been found that eight Irish acres of bog are sufficient to yield, during the fine weather in summer, 5000 tons of the compressed fuel. The cost of production, as far as can be ascertained by careful experiments, is, for 400 tons per week 3*s.* 11½*d.* per ton, excluding expense of management; but as this could not make the total cost of production more than 5*s.* 10*d.* per ton, and the peat has been sold for 9*s.* per ton at the works, and 11*s.* 6*d.* in Dublin, there is a good margin for profit. Though by no means unmindful of the fact that there have been many failures in attempts to utilise peat for fuel, we trust that Mr. Hodgson's plan, which has borne the test of practical experiments, will be carried out on a large scale.

PRINCE OF WALES MINE.—(From M. Peter Watson's "Weekly Mining Circular and Share List," of yesterday, No. 462, Vol. X.)—For the last few weeks I have strongly recommended a purchase of these shares at 47*s.* 6*d.* to 52*s.* 6*d.*, and again last week at 54*s.* This week they have advanced to 3*l.* to 3¼*l.* per share, and from information which I have received this (Friday) morning, I believe they are on the eve of a very great rise in price, and I strongly recommend an immediate purchase. The sale of ore, 146 tons—the produce of one month's working—will take place next week; it is expected to realise about 1100*l.* with carriage, and will leave a profit of about 500*l.* for the month. The next month's sale of ore, in all probability, will leave something like 600*l.* to 700*l.* profit; and if the important discoveries now being made hold on, it is not at all unlikely but 800*l.* to 1000*l.* per month profit will be given ere long. The lode in the 65 cross-cut south is almost daily expected to be met with, and if cut rich as it was in the level above (and there is every indication of this) there will be great excitement in the shares; shareholders will, therefore, not only do well to hold on, but increase their interest. I know the property well, and have continued to recommend a purchase of the shares since they were at 5*s.* to 6*s.* each. In my Weekly Circular No. 346, Vol. 7, of Nov. 24, 1865, I stated as follows:—"In cross-cutting at the 45 fathom level they have discovered a rich lode, producing 3 to 4 tons of good copper ore per fathom, and in sinking the shaft a few fathoms deeper they expect to have a still more valuable lode. With a proper development of this property it is likely to become a great prize in this district, and I advise a purchase of shares." And again in Circular 347, a week after, I stated as follows, when shares were at 6*s.* to 7*s.* each:—"The lode in the 45 fm. level is stated to produce 4 tons of copper ore per fathom. In sinking the engine-shaft below this level, I predict they will meet with a good course of copper ore when the lode is cut through." My inspecting agent, whose report I have received this (Friday) morning, gives the following details of the principal points in operation and their value:—"The lode in the 55 east has been taken down, and proves to be from 5½ to 6 feet wide, a splendid course of ore, and worth from 90*l.* to 100*l.* per fathom; from an average sample fairly taken from the lode it proves to be worth over 100*l.* per fathom. It certainly is the best course of ore ever seen in this mine. The 55 fm. fathom west has gone through two fissures of loose breast heads, to the west of which the lode has again improved, and is worth full 20*l.* per fathom. From present indications a great improvement may fairly be calculated on here, as they are now getting under the run of ore where it first came in the 45 fm. level west. In the 55 fm. level cross-cut north, a small branch, underlying north, has been intersected, containing mundic and yellow copper ore; the water continues strong from this end, and the killas is favourable for driving. The lode in the 45 west is of a very promising character, and worth from 10*l.* to 12*l.* per fathom. The stopes throughout the mine continue to produce well, and they are again forward for another good sampling of ore. The prospects of the mine have very much improved of late. I have given this (Friday) morning 5*s.* per share for the call of shares for time on at 5*l.* per share.

THE MINERAL WEALTH OF NEVADA, U.S.—One of the most attractive collections of minerals shown at the late Paris Exhibition, was that of 296 specimens of silver, illustrating the mineral wealth of the State of Nevada, which was under the care of Col. D. E. BUEL, and as the principal specimens have been transferred to London, an excellent opportunity is afforded to those interested to examine the collection in this country. It appears that the Great Eastern Mine, in the Reese River district, Lander County, produces specimens yielding more than 47*l.* worth of bullion to the ton of ore, although 15 per cent. is lost in the mill; and the ores from Manhattan, North Star, Timoke, Florida, Magnolia, Savage, Yankee Blade, and other mines (there were 40 groups of specimens exhibited from this locality equally rich. Eleven specimens from Austin, Nevada, analysed by Mr. L. E. Rivot, chief engineer of mines, and director of the assay office connected with the Imperial School of Mines at Paris, gave extraordinary results: the Timoke Mine specimen of grey and ruby silver gave upwards of 1000*l.* worth of silver to the ton of 2000 lbs.; the Florida, over 800*l.* worth; and so on, many of the specimens assayed containing also small quantities of gold. Judging from the specimens, the district from which they were obtained must be particularly rich in mineral wealth; and, indeed, this appears to be especially corroborated by the actual returns from two mines owned and worked by Colonel Buel himself, having taken out bullion to the amount of over $200,000, with a 10-stamp mill, during the past year. The bullion product of Eastern Nevada for 1867 was about $3,000,000. The collection is of exceeding interest to metallurgists, and will well repay a visit to Palmerston-buildings, Old Broad-street, where Col. Buel will readily afford every facility for examination, and give necessary information.

RAILWAYS AND MINES DURING 1867.—A list of 24 British railways, with the prices quoted on Jan. 1 and at the close of the year, shows a loss of value on the twelvemonth of 17,137,000*l.* Out of a list of 44 mines only 9 have declined in market value during the year, whilst the remaining 35 have all, more or less, advanced; some, indeed, were quoted considerably higher in the course of the year, and maintain their improved position.

CHONTALES.—The general tenor of the last advices is of a most reassuring character. The mines have improved, while the Consuelo has been brought into a position to yield immediate returns; therefore, as the rainy season has set in, and the natives have returned to their employment, it may be fairly assumed that the monthly remittances will henceforth be gradually increased. As will be seen by the report of the manager, which appears in another column, the different points of operation at the several mines, exclusive of the rich "pillars," are yielding an average of 11 ozs. of gold per ton of ore; and this is irrespective of the Consuelo Mine, in which "No. 2 shaft has been holed to the adit, the lode, with the rich "nail" having held down to the bottom and having all the appearance of being as rich in depth as above." The previous advices stated that the "nail" had been cut, and reported to be worth more than 20 ozs. of gold per ton of ore, while the lode itself (4 feet wide) yields, apart from the "nail," an average of over 2 ozs. It is this ground which has now been rendered available.

ST. JOHN DEL REY.—The official details of the disastrous fire at Morro Velho appear in another column, from which it will be seen that it is impossible to form any correct opinion as to the extent of damage until the mine has been re-opened and duly examined. It is to be hoped, however, that as the fire occurred at a comparatively shallow depth, the deeper and more important workings may be found intact; but, under any circumstances, the executive merit the commendation of the shareholders for the conservative manner in which they have ever dealt with this successful enterprise. The value of this policy will now be practically experienced, inasmuch as there has been accumulated a reserve fund of 47,000*l.*, to which can be added the profits realised since the last dividend, and other available assets, amounting to a total of no less than 60,000*l.* This amount is applicable to the present emergency. Adverting to the augmentation of the reserve fund beyond 50,000*l.*, the managing director at the recent meeting stated "that as far as he was concerned he held it would be unwise, indeed, to allow the accumulation to cease at 50,000*l.*—that amount represented only five months' cost, and although he did not for one moment apprehend that an accident was likely to occur, yet there could be no doubt that at the time of the last accident, in 1864, the market value of the shares was supported by the knowledge that there was a reserve fund to meet all temporary requirements."

PENHALE UNITED SILVER-LEAD MINING COMPANY.—It appears that the sudden stoppage, some 12 months since, of the Penhale and Lomax Mines, about to be re-worked by this company, was occasioned entirely by the failure for a very large amount, of the principal shareholder, who was an extensive contractor in connection with the Spanish railways. The promoters of the present company being most desirous of getting all the data possible with respect to this property, and thinking it important to ascertain the actual condition of the mines at that period, have re-issued the last published official reports of the then manager of the mines (Capt. Mitchell), so that intending investors may be enabled to judge of the prospects of the mines at the time of their being abandoned. The report, dated Feb. 12, was published in the *Mining Journal* for Feb. 17, 1855; and it states that the quantity of silver-lead in the "backs" is calculated to be about 2000 tons, "one-half of which can be brought to surface at from 2*l.* to 3*l.* per ton." This would, of course, leave a very large profit. The last report is dated March 12, 1855, and it states 45 tons of ore would be sold in a few days, so that it seems beyond all doubt that the present company will have large returns of silver-lead within a short period of commencing operations, and increases the directors confidence that the property of the company offers exceptionally good prospects of success. Capt. S. Mitchell reported that at the engine-shaft the 90 fm. level south is driven about 8 fms., lode 18 in. wide, producing 1 ton of silver-lead per fathom; the ground about the lode being still congenial for ore. The 90 fm. level north was driven about the same distance, the ground being favourable; the lode is 1 foot wide, producing 9 cwts. of ore per fathom. The stope in the back of this level was producing 10 cwts. of ore per fathom. At Morcom's shaft, the 90 fm. level south was looking prosperous; lode 2 feet wide, producing 11 cwts. of ore per fathom. The same level north was then poor. He did not expect much ore for 2 fms., after which they would have from 50 to 60 fms. of good tribute ground. The lode in the bottom level presented a more favourable aspect than it had in the last three levels above. The propriety, therefore, of sinking the engine-shaft will soon be felt, as the lode has become more speedy, consequently the backs would be taken away much quicker. He recommended that stamps should be erected for crushing the tails, which would save from 1 to 2 tons of ore per month. These facts, connected with the former workings, are the more important, since silver-lead was then selling for less than now, and the cost of labour and materials are much higher. The subscription list for shares will close on Thursday next.

Marshal Neil has lately made experiments in France with the wood gunpowder invented by Capt. Schulze, of Potsdam. It is found to be extremely advantageous for rifles, as it leaves no fouling. The English Government should not overlook it, when determining the rifle of the future. The chamber ought to be a trifle larger than for the common powder, as Schulze's powder, though strong, is much lighter.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, in which appears—Original Correspondence: Mine Inspection and Government Inspectors, by Lord Kinnaird—Colliery Explosions—Iron Pyrites, F. T. Barry—Miners' Rights in the Forest of Dean—The Disaster at the St. John del Rey Mines—Mining in California, W. Hoskin—The Tin Discoveries in Missouri, U.S., R. W. Dunstan—Canada Gold Mines, Alexander Somerville—New Mining Ground, Charles Thomas—History of Mining, Thomas Spargo—Slate Veins of Devon—Price of Tin—Darien Canal, Dr. Cullen—Devon Wheal Lopes—West Okel Tor—The Javali Mine—Monthly Summary of Mining in Australasia—Foreign Mine Reports—Foreign Mining and Metallurgy—Port Phillip and Colonial Gold Company and Victoria (London) Mining Company Directors' Reports, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JANUARY 17, 1868.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	75 0 0-	76 0 0
Tough cake and tile	73 10 0-	74 0 0
Sheathing & sheets.	77 0 0-	78 0 0
Bolts	83 0 0-	—
Bottoms	85 0 0-	—
Old (Exchange)	66 0 0-	67 0 0
Burra Burra	79 10 0-	80 0 0
Wire.....per lb.	0 1 0-	0 1 0½
Tubes	0 0 11½	1 0

BRASS.	Per lb.
Sheets .....per lb.	9d.-10d.
Wire ..... „	8½d.-9½d.
Tubes ..... „	10½d.-11d.
Yellow Metal Sheath.p. lb.	7¼d.- —
Sheets ..... „	6¾d.-

SPELTER.	Per ton.
Foreign on the spot.	£20 10 0 —
„ to arrive ..	20 10 0 —

ZINC.		
In sheets	£26 0 0-	27 0 0

TIN.	
English blocks	96 0 0
Do., bars (in barrels)	97 0 0
Do., refined.....	99 0 0
Banca	90 0 0
Straits	87 0 0

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 6 0- 1 8 0
IX Ditto, 1st quality	1 12 0- 1 14 0
IC Ditto, 2d quality..	1 4 0- 1 6 0
IX Ditto, 2d quality..	1 10 0- 1 12 0
IC Coke.....	1 1 6- 1 2 6
IX Ditto	1 7 6- 1 8 6
Canada plates, p. ton..	13 10 0- —
Ditto, at works	12 10 0- —

IRON.	Per ton.
Bars Welsh, in London	6 10 0- —
Ditto, to arrive	6 10 0- —
Nail rods	7 0 0- 7 10 0
„ Staffd. in London	7 10 0- 8 10 0
Bars ditto	7 10 0- 9 10 0
Hoops ditto	8 10 0- 9 12 6
Sheets, single.....	9 5 0-10 0 0
Pig No. 1, in Wales ..	3 15 0- 4 5 0
Refined metal, ditto..	4 0 0- 5 0 0
Bars, common ditto ..	5 15 0- 6 0 0
Do. mrch. Tyne or Tees	6 10 0- —
Do., railway, in Wales	5 0 0- 5 10 0
Do., Swed. in London.	10 5 0-10 10 0
To arrive	10 5 0-10 10 0
Pig, No. 1, in Clyde..	2 12 9- 2 18 0
Do. f.o.b. Tyne or Tees	2 9 6- —
Do. Nos. 3, 4, f.o.b. do.	2 6 6- 2 7 0
Railway chairs	5 10 0- 5 15 0
„ spikes	11 0 0-12 0 0
Indian Charcoal Pigs, in London p. ton..	7 0 0- 7 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)	14 5 0- —
„ (hammered)	15 5 0-15 10 0
Ditto, in faggots	16 0 0- —
English, spring	17 0 0-23 0 0
QUICKSILVER (p. bottle)	6 17 0- —

LEAD.	Per ton.
English Pig, com.....	19 0 0-19 5 0
Ditto, LB.....	19 10 0- —
Ditto, WB	21 10 0- —
Ditto, ordinary soft	20 0 0- —
Ditto, sheet.....	20 0 0-20 5 0
Ditto, red lead	20 15 0- —
Ditto, white	27 0 0-30 0 0
Ditto, patent shot....	22 10 0-23 0 0
Spanish.....	18 10 0-18 15 0

* At the works, 1*s.* to 1*s.* 6*d.* per box less.

† A Derbyshire quotation: not generally known in the London market.

REMARKS.—There appears to be at present rather more encouraging features in the Metal Market than there has lately been, and although the amount of business actually transacted has not been much increased, yet there are a great many more enquiries afloat, and there seems to be a much greater disposition to enter into transactions. Buyers appear to be feeling their way with evident desire, if possible, to do business. These are certainly good signs, which it is to be hoped will continue, and lead, ere long, to a marked improvement in the metal trade. We fully anticipate that now we shall gradually find matters mending, and look forward with satisfaction to the anticipation of a good business being done in the spring. The intelligence received during the week from the United States of the determined opposition of Congress to the policy of President Johnson, and the very decided step taken by them in reinstating Mr. Stanton as Secretary of War, after he had been removed by the President, and the consequent withdrawal of General Grant from that office, is not calculated to produce much confidence in the position of affairs there, and lead to the fear that increased difficulties may take place in that country, which should they arise would tend seriously to affect commercial relations and interrupt the considerable business we are now doing with the States, as well as prevent the increase of that business which it is hoped may shortly take place. We trust, therefore, that future advices may tend to allay these fears, and that nothing may occur to interfere with our commerce with America.

COPPER.—The advices from Chili state that the charters for England consist of about 2000 tons. The market remains dull, and without any improvement in prices.

IRON.—In Staffordshire the general result of the quarterly meetings has not been encouraging. Orders have been received for the ensuing quarter, but they are of small amount; and, with scarcely any exception, some abatement must be made from list rates to secure contracts. Buyers press for lower terms, and as wages are not to be altered in South Staffordshire the makers are under great disadvantages. In Welsh prospects do not appear to be brightening at present, although there are hopes that as the year advances there will be some improvement in the demand, especially on home account. Railway securities are believed now to have reached their lowest point, and in proportion as enhanced prices prevail there will be larger purchases of iron on the part of the railway companies. Foreign enquiries have not increased in number, the shipments being comparatively small, and during the month of December the total exports only reached 3158 tons, of which the United States took 1735 tons. This month the clearances to America are expected to be larger, and advices from the States indicate that several hundreds of miles of railway require re-laying in that country. In Swedish iron the amount of business done is only small. In Scotch pig-iron the market has been quiet during the week, and the price has rather given way, the last price received from Glasgow being 51*s.* 6*d.* cash.

LEAD.—The market continues firm, and the demand has considerably improved; common English pig may now be quoted 19*l.* to 19*l.* 5*s.*, and Spanish 18*l.* 10*s.*

TIN.—No activity whatever has characterised the market for Straits during the week. Some small business has been done at 87*l.* cash, and for arrival at 88*l.* 10*s.*

SPELTER.—The market has remained quiet, the price on the spot continuing at 20*l.* 10*s.*, but the transactions have been only limited.

TIN-PLATES.—Makers have not yet received any accession of orders, and Liverpool and Manchester houses are purchasing only very sparingly. STEEL is in rather better demand.

QUICKSILVER.—Orders continue of an average character only.

MIDDLESBOROUGH, JAN. 16.—The "Iron Trade Review" states:—The Cleveland iron trade is steady, and prices remain unaltered. On Tuesday last the trade commenced the regular weekly ironmasters' meetings, which will be held in the Town Hall, Middlesborough. There was a good attendance, upwards of 60 representatives of the local trade being present, besides some from Manchester, Newcastle, Darlington, and other places. A fair amount of business was transacted. The make of Cleveland pig-iron for 1867 has been 1,147,000 tons, which is considerably more than the make of Scotland, and more than twice the make of South Staffordshire.

The settlement of the fortnightly account took place in the MINING SHARE MARKET on Wednesday, and was very heavy in several mines, and although the account occupied the chief attention of the dealers for some days, a very active business has also been done during the week in several mines, both for cash and the next fortnightly settlement. One or two important improvements have given life to the market, and caused a deal of speculation, as well as a number of purchasers for investment. Among the most prominent mines dealt in have been Prince of Wales, Great Retallack, East Grenville, Chiverton Moor, West Chiverton, Wheal Grenville, Chontales, West Frances, Wheal Buller, Clifford, East Gunnislake and South Bedford, Wheal Chiverton, Carn Brea, South Frances, Mary Ann, Trelawny, and a few others. Prince of Wales shares have been very largely dealt in, and leave off 3 to 3¼; the 55 east has improved to 90*l.* per fathom, and the finest course of ore ever seen in the mine. The cross-cut in the

65 south will reach the lode about the middle of February. The same branch met with in the level above has been passed through, and the ground is now a beautiful killas. West Prince of Wales, 9s. to 11s.; Carn Brea, 24 to 26; Chiverton Moor, 5⅜ to 6; Clifford Amalgamated, 6 to 6¼.

Chontales have risen nearly 15s. per share since the arrival of the mails, and leave off 3⅜ to 3⅞. The reports are considered much more satisfactory, and regular and increasing returns of gold may now be looked for monthly. It has often been asked why with a "nail" of gold going down in Consuelo, once reported worth 147 ounces of gold to the ton, and a large lode besides, worth in places as much as 20 ounces, their yield has not been returned; and the answer is, that until No. 2 shaft had been communicated with the deep adit for ventilation the ground could not he worked away. This communication, however, has now been made, and the ground will be set for stoping, and returning the gold at once. The San Domingo and San Antonio Mines have improved, and the erection of the machinery at Pavon is progressing satisfactorily. Up to the end of November water had continued very scarce, and the return of gold for three weeks was 242 ounces, but early in December heavy rains had set in. The health of the establishment is good, and upwards of 100 natives had returned to their work. The large machinery in course of erection at Pavon will render the company independent of the wet season, and the tramroad from Consuelo to these works, nearly two miles in length, is getting towards completion; altogether, therefore, after two years' heavy expenditure, to enable the company to return the gold as cheapily and expeditiously as possible, it would seem that the turning point has been reached.

East Wheal Grenville, 2½ to 2⅝; the lode in the 110, west from the engine-shaft, is 2½ ft. wide, worth 1½ to 2 tons copper per fathom; good work for tin. Wheal Grenville shares have advanced to 2, 2⅛; no further change in the mine. South Grenville shares have been in demand, at 6s. to 8s., and there are one or two improvements expected. Cook's Kitchen, 9 to 10; East Basset, 11 to 12; East Caradon, 4⅞ to 5⅛; East Carn Brea, 2 to 2¼. Great Retallack shares have advanced to 3¼, 3½; the lode in No. 2 shaft is 2½ ft. wide, with ore coming in, and now worth from 2 to 3 cwts. per fathom; the back over the 30 produces from 12 to 15 cwts. per fathom. East Gunnislake and South Bedford, 2 to 2¼; East Lovell, 8¼ to 8½; East Russell, 25s. to 30s.; Frontino and Bolivia, 19s. to 21s.; Great Laxey, 17 to 18; Gt. North Laxey, ⅝ to ¾; Great South Tolgus, 20s. to 22s.; Great Vor, 18 to 19; Maes-y-Safn, 27½ to 30; Marke Valley, 6 to 6¼. Buller, 16 to 17; the 60 west continues worth 15*l.* per fathom for copper ore, and in driving the cross-cut north in the 50 a branch of copper ore worth 7*l.* per fathom has been met with. North Crofty, 2⅜ to 2⅝; North Treskerby, 29s. to 31s.; South Frances, 24 to 26; Tincroft, 13 to 14; West Caradon, 9½ to 10½; West Chiverton, 66 to 68; West Drake Walls, 8s. to 10s.; Wheal Basset, 80 to 82½; Wheal Chiverton, 4¾ to 5; Wheal Mary Ann, 19 to 20; Wheal Seton, 85 to 90. West Frances shares have advanced to 19, 20; we hear the lode in the 85 west has improved to 80*l.* per fathom, and altogether the mine holds out fine prospects.

On the Stock Exchange the general tone of the Mining Market is favourable, St. John del Rey forming the exception, the shares having again fallen considerably, and close 34 to 30, with a not very strong market. The letters by the French mail are anxiously looked for, and are expected to be delivered on Monday. On the other hand, the news from all the other Brazilian mines was considered very favourable, and quotations have advanced, Don Pedro and Anglo-Brazilian being in especial request. The following are the closing quotations:—Don Pedro, 3 to 3¼ prem.; Anglo-Brazilian, par to ⅛ prem.; Rossa Grande, par to ⅛ prem.; Chontales, 1 to ⅜ dis.; Pestarena, ¼ dis. to par; Anglo-Italian, ⅛ to ⅜ prem.; United Mexican, 1¼ to 1⅓; Frontino and Bolivia, ⅞ to 1; Port Phillip, 1⅜ to 1½; Central American, ¼ dis. to par; Anglo-Argentine, ¼ to ½ prem.; English and Australian Copper, ⅜ to ½; Panulcillo Copper, ¾ to 1; Kapunda, 5-16ths to 7-16ths; Cape Copper, ½ dis. to ½ pm., nominally; Yudanamutana, ⅞ to 1¼. British mines are in very active demand, and in several instances prices have advanced. Great Wheal Vor, 17½ to 18; Prince of Wales, 3 to 3⅛; Great Laxey, 17¼ to 18; Wheal Seton, 95 to 97; West Seton, 190 to 200; New Seton, 70 to 75; West Chiverton, 67 to 69; Great Devon Consols, 425 to 435; West Caradon, 10 to 11. West Drake Walls shares are enquired for, at 8s. to 10s. New Lovell, ⅜ to ½; North Chiverton, 4¼ to 4½. Grenville shares are in demand, and a very good general business is being done. Chiverton shares are steady, at 4¾ to 5. Chiverton Moors have risen to 6, 6⅛. Great Retallack, 3⅜ to 3⅝. Cliffords are flatter, at 5½ to 5⅝. Carn Breas are brisk, at 24 to 26; East Caradon, 4⅞ to 5⅛; Marke Valley, 6 to 6¼; West Kitty, ⅜ to ¾. Central Snailbeach has an important discovery, and is likely to be a success. North Wales Mines are turning up well. Mineras are very firm, at 170 to 175. Maes-y-Safn, 28 to 30; Westminster (Limited), 5 to 5¼; the next sale of lead will not be less than 70 tons. There are several other mines in this district now comparatively neglected that are likely to turn up well.

At East Pool Mine meeting, on Monday, the accounts showed a credit balance of 718*l.* 19s. 10d. A dividend of 640*l.* (5*l.* per share) was declared, leaving 114*l.* 10s. 9d. to be carried forward to the credit of the next account.

At Cwm Erfin Mine meeting, on Jan. 8, a dividend of 867*l.* (1*l.* per share) was declared. The prospects of the mine are good.

At the Penhale Wheal Vor meeting, on Tuesday (Mr. Holroyd in the chair), the accounts (including the carrent month's cost) showed a balance of liabilities over assets of 1220*l.* 2s. 7d. A call of 10s. per share was made. The details appear in another column.

At New Bampfylde Copper Mine extraordinary meeting, on Tuesday (Mr. Charles Hand in the chair), the special resolutions passed at the previous meeting were unanimously confirmed. Reference was made to the fact that some samples of ore taken from the back of the old workings, on the north lode had, upon assay by Messrs. Johnson and Matthey, yielded at the rate of 8⅛ dwts. gold per ton, and the question of its profitable extraction was under consideration. Details in another column.

At North Downs Mine meeting, on Thursday (Mr. H. Milford in the chair), the accounts showed a debit balance of 694*l.* 13s. 5d. A call of 5s. per share was made. Details in another column.

The Bank of England return for the week ending on Wednesday evening, showed, in the ISSUE DEPARTMENT, an increase in the "notes issued" of 44,685*l.*, represented by a corresponding increase in the coin and bullion on the other side of the account. In the BANKING DEPARTMENT, there is shown a decrease in the "public deposits" of 426,202*l.*, and in the "other deposits" of 416,170*l.*: together, 842,372*l.*; an increase in the "seven day and other bills" of 35,555*l.*, and in the "rest" of 37,964*l.*: together, 73,519*l.* = 768,853*l.* On the asset side of the account there is shown an increase in the "Government securities" of 200,000*l.*, and a decrease in the "other securities" 904,081*l.* = 704,081*l.*, and, deducting this from the decrease of 768,853*l.* on the other side, there remains a decrease in the total reserve of 64,772*l.*

On the Stock Exchange a moderate amount of business has been transacted in Mining Shares during the week. The following prices are officially recorded in British Mining Shares:—West Chiverton, 67¼; Wheal Seton, 86; Great Laxey, 17⅛; Great Wheal Vor, 17½; Prince of Wales, 3.—In Colonial Mining Shares the prices were:—Scottish Australian, 1 to 1-16th; General, 13⅞ to 14; Port Phillip, 1¼; Yudanamutana, 1 1-16th.—In Foreign Mining Shares the prices were:—Chontales, 3¼, 3⅛, 3⅜; Don Pedro, 2⅞, 2⅜, 2 13-16ths, 2⅞, 3, 3 3-16th prem.; St. John del Rey, 37, 35, 33, 28¼, 30½, 34, 32½, 34½, 30½; United Mexican, 1⅓; Anglo-Brazilian, ½, ⅝, ⅛; Rossa Grande par, 1, 1 1-16th prem.; Frontino and Bolivia, 1 1-16th.

COAL MARKET.—The arrivals this week number 61 vessels, nearly all screw steamers. The mild weather caused a diminished demand for house coals, and business has ruled dull, prices closing at abont 1s. 6d. per ton reduction in the week. Hartley coals have been a dull sale, bnt little alteration in prices. Hetton Wallsend, 20s.; Haswell Wallsend, 19s.; Hetton Lyons Wallsend, 16s. 6d.; Tunstall Wallsend, 16s. 6d. Unsold, half a cargo: at sea, 120 ships.

THE COPPER TRADE.—Our columns have recently contained several intimations as to the exceedingly depressed state of the copper trade during the past year, prices having, consequently, fallen about 30*l.* per ton below the rates current at the commencement of the year 1866. That large importations of foreign ores would take place in the face of such almost unparalleled depression could scarcely be expected; and as Swansea imports something like three-fourths of the foreign ores, the trade of that port has suffered to a very appreciable extent during the past year. A meeting of the Trustees of the Swansea Harbour was held on Monday, when the statistical returns of the trade for the past year were brought up, and the figures presented will afford some criterion for judging of the depression of trade. During the past year the total number of vessels trading with the port was 5687, with an aggregate registered tonnage of 724,539 tons, and the shipping rates received amounted to 17,542*l.* 10s. 3½d., whilst during the previous year of 1866 the number of vessels trading with the port was 5527, with an aggregate registered tonnage of 777,640 tons, and the shipping rates received amounted to the sum of 20,634*l.* 15s. 2½d. Thus whilst there were 160 more ships trading with the port during 1867 than during 1866, the decrease in tonnage was no less than 53,101 tons, and the shipping rates of 3002*l.* 4s. 11d. By far the greater part of this decrease was in the foreign trade, the coasting trade having slightly increased. We have already stated that at the present moment a very important question to the commercial world is undergoing a practical solution—whether it is cheaper to smelt the ores in Chilian provinces, or to bring them to England to smelt as heretofore. Upon this question opinions differ, but the experiment is being tried, and in the meantime trade suffers, and many of the large vessels, expressly built for the copper ore trade, are now engaged in other articles of commerce. During the past two or three weeks the arrivals of copper ore laden vessels have increased, and hopes are entertained that it will soon be found that England still maintains its supremacy for copper smelting, and that trade will shortly resume its previous channels.

TO CAPITALISTS.—ONE or TWO GENTLEMEN are INVITED TO JOIN FOUR OTHERS (resident in London) in WORKING a VALUABLE SLATE QUARRY in NORTH WALES, of first class importance.

A considerable sum of money has been expended in its development and in the erection of machinery, and it is now in a position to produce any quantity of slates and slabs for the market.

Address, by letter, to Messrs. TILLY and THOMAS, accountants and public auditors, 1, Finsbury-circus, London. 65

SLATE QUARRY INSPECTION.

A QUARRY MANAGER, who is also an Engineer, skilled in the geology of slate rock, is now READY to INSPECT and REPORT upon any SLATE PROPERTY in the UNITED KINGDOM or ABROAD.

To capitalists who wish to embark in slate quarry enterprise the advertiser can give the most reliable advice and assistance.

Address, in the first place, to "Quarry Manager," 26, Fleet-street, London, E.C. 66

WANTED, FOUR THOUSAND POUNDS, upon SECURITY of an EXCELLENT COLONIAL COLLIERY.

Apply, with real name and address, to J. H. HOWARD, Esq., solicitor, 5, Quality-court, Chancery-lane. 67

TO MERCHANTS, ACCOUNTANTS, AND OTHERS.

WANTED, by the ADVERTISER, a SITUATION as CLERK. Well qualified, and can be highly recommended. Salary expected very moderate. Age 26 years.—Apply to "Trebo," Post Office, Neath. 68

TO ACCOUNTANTS.

WANTED, for a short period, a PERSON to MAKE UP MINE ACCOUNTS. Must be thoroughly conversant with the Cost-book System in every detail. No other need apply. Liberal remuneration. Address, "L. M.," MINING JOURNAL Office, 26, Fleet-street, London. 69

WANTED, a RE-ENGAGEMENT as MINERAL SURVEYOR or DRAUGHTSMAN. Good references and specimens of drawing. Apply, "A. Z.," MINING JOURNAL Office, 26, Fleet-street, London, E.C. 70

LONDON AGENT.—A MECHANICAL ENGINEER, a man of extensive and varied business experience, who holds a very responsible public appointment, WISHES to OCCUPY the WHOLE OF HIS SPARE TIME (which is considerable) in the business of some AGENCY.

Address, No. 1045, *Builder* Office, 1, York-street, Strand, W.C. 71

A GOOD SECOND-HAND HORSE WHIM, COMPLETE, WANTED, to be delivered near Oxford.

Address, stating lowest price and full particulars, to "Mines," MINING JOURNAL Office, 26, Fleet-street, London. 72

FOR SALE, the MINING JOURNAL for the years 1860 to 1867 (both inclusive), unbound, and about twenty Numbers of different dates that have been received in duplicate.

Address, "A.P.," MINING JOURNAL Office, 26, Fleet-street, London, E.C. 73

FOR SALE, a FIRST-CLASS MINING PROPERTY in CORNWALL, producing TIN, COPPER, and CHINA-CLAY.

Address, "W. B.," care of J. S. Salaman, Esq., 22. St. Swithin's-lane, E.C. 74

TO BE SOLD, for £150, a 56-in. cylinder PUMPING ENGINE, 10 ft. stroke in cylinder, and 9 ft. in shaft, in good order and condition. Can be seen standing.

Apply to WILLOUGHBY BROTHERS, Central Foundry, Plymouth. 75

SLATE QUARRY.—TO BE LET OR SOLD, the WHOLE or a PART of a VALUABLE and PRODUCTIVE BLUE SLATE QUARRY, of superior quality, situate in North Wales.

For particulars and terms, apply to Mr. PANNETT, 5, Herbert-place, or at the *Cambrian* Newspaper Office, Swansea. 76

SILVER ORES.

COLONEL DAVID E. BUEL, late Commissioner from Nevada (U.S.) to the Paris Exposition, has on EXHIBIT the LARGE COLLECTION of SILVER ORES from that STATE at Room 108, Palmerston-buildings, 34, Old Broad-street, E.C.

The Colonel most cordially invites the public to call and examine the collection, where he will be pleased to impart all information in his power in regard to the mining development of the Western Coast of America. 77

STEAM, ANTHRACITE, AND BITUMINOUS COAL.

MR. EDMUND STRANGE PARSONS, of NEATH, GLAMORGANSHIRE, who has had MANY YEARS' EXPERIENCE in the PRACTICAL WORKING of COLLIERIES in SOUTH WALES, has to OFFER several VALUABLE FIELDS of EACH of the ABOVE DESCRIPTIONS of COAL, which he could place before investors upon terms that cannot fail to be highly remunerative.

The most reliable information may be ensured as to the merits of any properties in the Principality, upon moderate terms, and references of the highest character afforded. 78

MR. S. GRAY, MINING ENGINEER, EXPORTER of MINERALS, &c., BONN-ON-THE-RHINE, PRUSSIA.

Gentlemen requiring information respecting mineral properties in this part of Germany, or on the importation of minerals or metals, as in particular Phosphate of Lime, Manganese, Clays, Spiegeleisen, &c., &c., may obtain it on application.

Orders executed at the lowest rates. Agencies undertaken. Surveys, plans, and reports supplied on moderate terms.

The best references both in Germany and at home can be given. 77

MR. H. D. HOSKOLD, MINING ENGINEER, LAND AND MINERAL SURVEYOR, CINDERFORD, NEWNHAM.

Gentlemen requiring reliable and correct information respecting any Coal or Iron Mine Property in the Forest of Dean may obtain it on application.

Surveys, Plans, Reports, and Valuations on the usual moderate terms. 78

MR. J. S. MERRY, ASSAYER AND ANALYTICAL CHEMIST, SWANSEA. 79

ASSAY OFFICE AND LABORATORY, No. 2, CROWN CHAMBERS, CROWN COURT, THREADNEEDLE STREET, CONDUCTED BY W. T. RICKARD, F.C.S., &c. (Late MITCHELL and RICKARD).

Assays and analyses of every description of mineral and other substances, manures, &c.

Gentlemen going abroad for mining purposes instructed in assaying, and the most improved methods of reducing gold, silver, and other metals.

MINING PROPERTIES INSPECTED AND REPORTED ON. 80

MR. THOMAS THOMAS, ASSAYER, &c., COPPER ORE WHARVES, SWANSEA. 81

THE ROSSA GRANDE GOLD MINING COMPANY (LIMITED).—The Board of Directors of this company hereby give notice that they have THIS DAY made a CALL of TWO SHILLINGS per share on the shares in the capital of this company, payable at the Imperial Bank (Limited), 6, Lothbury, London, on or before Saturday, the 29th day of Feb., 1868.

And notice is further given, that interest at the rate of 5 per cent. per annum will be charged upon all sums remaining unpaid in respect of the said call after the said 29th day of February, 1868.

By order of the Board, JOHN E. DAWSON, Sec.

9, Size-lane, Bucklersbury, London, Jan. 7, 1868. 82

VICTORIA (LONDON) MINING COMPANY (LIMITED).—Notice is hereby given, that the ORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, in the City of London, on TUESDAY, the 21st day of January, 1868, at Two o'clock in the afternoon precisely, for the following purposes:—

To receive and consider a report of the proceedings of the company and a statement of the accounts since the last ordinary general meeting.

To elect directors in the place of R. H. Bland, Esq., and Edmund Westby, Esq., who retire by rotation, and offer themselves for re-election.

To elect auditors for the ensuing year.

By Order, C. H. FIELDER, Sec.

Offices, 30, Moorgate-street, E.C., Jan. 7, 1868.

N.B.—The Transfer Books of the company will be closed on Tuesday, the 21st January, 1868, and will re-open on Wednesday, the 5th February, 1868.

TO CAPITALISTS SEEKING A FIRST-CLASS INVESTMENT £5 per cent. per annum, free of income tax, with a prospective increase to £7 per cent. per annum.

CAPITAL, £1,750,000, AND UPWARDS.

THE HULL DOCK COMPANY,

Incorporated by Act of Parliament, 1774,

Sole proprietors of the Docks at Hull, the third port in the kingdom, are now issuing the remainder of the share capital authorised by recent Acts of Parliament. These shares are guaranteed to pay a dividend of £5 per cent., free of income tax, until one year after the opening of the Western Dock, and are limited to pay a maximum dividend of £7 per cent. in terms of the Company's Act of 1861. The new shares rank equally with the existing shares of the company, and there are no preference shares. The tonnage of the port is rapidly increasing, and in the year 1866 amounted to 1,343,819 tons.

The Dock Estate consists of the six docks at Hull, with large and commodious warehouses, offices, &c., adjacent to the docks, and the company possess large unincumbered house and other property, which, in addition to the rates and dues payable to the company, produce upwards of £14,000 a year. The reserve fund of the company available against contingencies is upwards of £65,000. The Western Dock, now in course of construction, is expected to be completed in the year 1868. The North-Eastern Railway Company hold £50,000 of the share capital of the company, and the Trinity House of Hull £30,000. The Lancashire and Yorkshire Railway Company are seeking parliamentary powers in the session 1867-8 to enable them to subscribe to the shares of the Dock Company. The loan capital has been raised at rates averaging under £4 12s. per cent. The shares are £50 shares, the calls on which may be made by periodical payments extending over several years, or in one or more sums, at the option of subscribers.

Applications for shares and for detailed particulars of the financial position of the company may be made to G. W. DUMBELL, Secretary.

Dock Office, Hull, November 18, 1867. 84

ANALYSES OF COAL, CANNEL, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by A. NORMAN TATE, F.A.S.L., &c., ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER (Author of "Petroleum and Its Products," &c.), MOLD, NORTH WALES.

Plans and estimates for oil and chemical works prepared, and their erection superintended.

Assays of metals and their ores carefully conducted. 85

THE COPPER TRADE.

Messrs. J. Pitcairn-Campbell and Co. (Liverpool, Jan. 15) write—The Copper Trade throughout the year 1867 has been unsatisfactory—miners, smelters, and importers all having cause to complain of the result. There have been no violent fluctuations, but a gradual decline in price, particularly in that of Chili bars and ingots, the enormously increasing supply of which, as far as regards the English smelters, is entirely altering the character of the trade. At present the market may be considered to be in a transition state, and this year will probably decide whether the bulk of the smelting trade will be conducted in England or abroad. We give below particulars of imports, and the comparative figures as bearing upon this subject are very striking. Consumption has been proceeding most satisfactorily; and although the quantity of copper available has been larger this year, stocks in first hands do not show much increase, while speculative parcels in second hands must be much exhausted, and both dealers and smelters are not heavily stocked. Since our last the market generally has continued depressed, but the last few days there has been a better feeling; and holders beng firm, 68*l.* has been paid for Chili bars. Sales on the spot in Liverpool have been 270 tons bars at 66*l.* 12s. 6d. to 68*l.*, 284 tons ingots at 72*l.* to 72*l.* 10s., and in Swansea 190 tons ingots at 72*l.* Quotations are 68*l.* for bars, 72*l.* for ingots, 13s. 9d. to 14s. per unit for ores and regulus, 14s. 9d. to 15s. for Barilla. About 31,532 tons ore and regulus, producing about 5132 tons fine copper, have been sold by ticket at Swansea, the average of the sales ranging from 13s. 10d. to 15s. per unit. The quantity of copper realised at Cornish sales has been about 8027 tons. The total quantity of foreign copper exported to the continent of Europe has been 11,907 tons. Altogether we calculate that about 64,936 tons copper has been available during 1867, made up as follows:—

	Tons fine.	1866.
Imports of foreign ores, regulus, and bars into Liverpool and Swansea ..... Tons	47,629	41,903
Imports of foreign ores, regulus, and bars into London	4,932	6,843
Cornish sold at ticketing	8,027	8,790
Other British	1,500	800
Copper made from foreign pyrites imported 1867	2,848	2,000
Total	64,936	60,338

The particulars of foreign copper ores as imported into Liverpool and Swansea are as follows:—

	Ores.	Regulus.	Barilla.	Copper contents in ore & reg.	Slab.	Total fine.
From Chili and Bolivia— Into Swansea	7,668	15,469	—	9,267	4,896	14,163
Into Liverpool	5,629	13,382	1,372	8,640	18,163	26,803
Total	13,287	28,851	1,372	17,907	23,059	40,966
Cuba & all other sources.	34,528	—	—	5,638	1,025	6,663
Total	47,825	28,851	1,372	23,545	24,084	47,629
Against in 1866	68,177	34,310	1,530	—	12,522	41,905
" 1865	75,046	39,969	565	—	18,284	51,756
" 1864	61,348	25,386	1,260	—	19,691	43,081
" 1863	72,970	18,066	942	—	9,470	31,324
" 1862	68,047	36,169	1,110	—	9,749	40,326

Of the above, Chili and Bolivia contribute in—1867, 40,966 tons fine; 1866, 35,366; 1865, 42,721; 1864, 36,355; 1863, 23,977; 1862, 35,430 tons fine. Into London the imports of copper in bars and slabs have been—1867, 4932 tons fine; 1866, 6843; 1865, 2947; 1864, 4503; 1863, 2707; 1862, 3418 tons fine. According to the Board of Trade returns for the United Kingdom, the exports of copper for the first eleven months of the following years, estimated in fine copper were as follows:—

	1867.	1866.	1865.
Manufactured	25,159	19,092	23,080
Unmanfactured	8,784	5,332	5,278
Foreign	12,584	11,293	7,937
Total	46,527	36,317	36,295

The average of the year for English cake copper has been 79*l.*, against 88*l.* 6s. 7d. in 1866, 93*l.* 2s. 7d. in 1865, 99*l.* 12s. 6d. in 1864, 93*l.* 10s. 9d. in 1863, and 97*l.* 13s. 11d. in 1862. Stocks of copper (Chilian and Bolivian) in first and second hands likely to be available are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1855	1646	4587	743	397
Swansea	1953	—	276	966	64
Total	3808	1646	4863	1709	461

Representing about 8550 tons fine copper, against 7550 tons, Jan. 15, 1867; 11,000, Jan. 15, 1866; 5400, Jan. 15, 1865; and 4720, Jan. 15, 1864.

Arrivals during the fortnight:—River Boyne, from Valparaiso, with 350 tons regulus and 410 tons bars. At Swansea—Henry Grenfell, from Huasco, with 364 tons regulus; and Cicero, from Carrizal, with 763 tons regulus.

THE PROSPECTS OF THE COPPER TRADE.—Messrs. J. Lewis and Son (Liverpool) write—Looking to the future, should the present excessive importation of bar and ingot copper continue, the only hope of any material revival in the value of copper produce depends upon a falling off in its production. This at present appears very probable, owing to the low prices that have now been ruling for so long a period; and although the same argument was used this time last year, and the expected result has so far not followed, yet it must be remembered that mines "die hard," and that it takes a long time for production to be stopped, although the mines may be working to a loss, as the existence of many depends upon their being kept constanly working, while others hope on for prices to rally.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (Jan. 17) write:—The firmness reported at the end of last week has still further developed itself, and resulted in business being done both in Chili bars and ingots at an advance of 1*l.* per ton. Burra Burra, too, has been in demand at 82*l.*, without finding sellers, but in other descriptions no marked difference in prices can be reported. Generally, however, we consider holders are a trifle firmer, and the feeling throughout the trade is gaining ground that, at all events, we have probably seen the worst. The charters advised by the Chili mail, received on the 14th inst., consisted of 150 tons of bars, 530 tons of ingots, and 1350 tons of copper in regulus, being 2030 tons fine copper, between Nov. 16 and Dec. 2. The sales have been about 250 tons of Chili bars, at from 68*l.* spot, to 69*l.* to arrive, closing buyers at these rates. About 200 tons Chili ingots changed hands at 72*l.* to 73*l.*, spot and to arrive, sellers remaining at the latter price.

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
Jan. 10—	Frank Mills	105	£13 3 0	Sheldon, Bush, & Co.
—	ditto	25	10 13 6	Sims, Willyams, & Co.
—	Prince Arthur Cousols.	26	13 17 6	Treffry's Executors.
—	ditto	10	9 17 6	ditto
13—	Dyliffe	44	11 5 0	Walker, Parker, & Co.
—	Frongoch	150	11 5 0	Mining Co. of Ireland.
—	Glogfach	40	13 1 6	Panther Lead Co.
—	Westfach	30	10 10 0	ditto
—	East Darren	85	15 10 0	ditto
—	Goginan	37	16 11 0	ditto
—	Cwm Erfin	40	15 9 0	ditto
—	ditto	20	15 3 6	Sheldon, Bush, & Co.
14—	Stiperstones	70	11 11 6	Burry Port Company.
15—	Trewetha	34	23 5 6	Treffry's Executors.
—	ditto	12	13 2 6	ditto

SILVER CHATS.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 15—	Foxdale	50	£12 14 6	R. Michell and Son.

BLACK TIN.

Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchaser.
Jan. 8—	Wh. Mary Hutch..	3 13 2 27	£55 5 0	£203 14 2	Truro Tin Co.

ARRIVALS AT LIVERPOOL.—The following have arrived at Messrs. LEWIS and SON'S Ore Wharves.

Alaska, from San Francisco, with		6 tons of silver ore.
ditto	ditto	140 tons of copper ore.
ditto	ditto	12 tons of copper regulus.
Norseman,	ditto	153 tons of copper ore.
Excelsior, from New York, with		100 tons of copper ore.

CLOSE OF SHARE LIST.

Notice is hereby given, that NO APPLICATIONS FOR SHARES will be RECEIVED after THURSDAY NEXT, the 23d inst.

HENRY L. PHILLIPS, Managing Director.

NOTICE.—The Steam Pumping and Winding Engines are newly erected, and the whole of the extensive Mine Plant and Machinery is in admirable condition. The Mines will be in full work within two months of the closing of this Share List, and sales of Silver-lead will be regularly made.

The Penhale United Silver-Lead Mining Company

(LIMITED).

Under the Companies Act, which strictly limits the liability of each shareholder to the amount of his subscription.

CAPITAL £20,000, IN 4000 SHARES OF £5 EACH. DEPOSIT 5S. PER SHARE ON APPLICATION, AND 10S. UPON ALLOTMENT.

IT IS FULLY ANTICIPATED THAT ONLY £4 PER SHARE WILL BE EVER REQUIRED.

MANAGING DIRECTOR.

HENRY L. PHILLIPS, Esq., Managing Director of the Frontino and Bolivia (South American) Gold Mining Company, 32, NEW BROAD STREET, E.C.

BANKERS—THE METROPOLITAN BANK, 75, CORNHILL, LONDON.

SOLICITOR—ALEXANDER KERLY, Esq., LONDON WALL, CITY.

SUPERINTENDING AGENT—CAPT. RICHARD PRYOR, REDRUTH. ENGINEER—MR. MATTHEW LOAM, LISKEARD.

OFFICES,—32, NEW BROAD STREET, LONDON.

PROSPECTUS.

This company is formed to complete the development of two very extensive and valuable silver-lead mines, well known as Penhale and Lomax, situated in the parish of Perranzabuloe, the richest silver-lead producing district in Cornwall.

The Penhale Mines, it will be seen, are in complete working order, and are held under leases for 21 years, at the unusually low royalty of 1-24th, the average royalty of the lead mines of Cornwall being about 1-16th.

Attention is particularly requested to these important facts. The recent total expenditure (included cost of leases) has been no less than £29,000, and the machinery is in such perfect condition that within two months of the possession of the property by this company regular sales of silver-lead can be made.

The celebrated East Wheal Rose Lead Mine, which has given £300,000 sterling in dividends, and the shares of which sold for £1600 each, is to the east of Penhale and Lomax Mines, whilst the rich West Chiverton Mine, which is now paying handsome dividends, and the shares of which are selling in the aggregate for about £200,000, or nearly £70 a share, is situated to the south. The Chiverton Mines, Retallack, Shepherd, Budnick, Golden, and other well-known productive mines are in the neighbourhood.

The Penhale and Lomax Mines having formerly made large returns of ore, with very inefficient machinery, their productiveness is proved by actual results. From what is known of these properties it is fully anticipated that, in a very short period, at least from 40 to 50 tons of rich silver-lead ore will be raised monthly, and that this quantity will be considerably increased as the works are extended, the depth of the engine-shaft being only 90 fms. The present machinery, which has lately been erected, is of the most ample description.

The reports which have been made upon these mines are unanimous as to their importance and value. Captain Pryor states:—"I fully anticipate that a splendid mine will be opened up, and very profitable results accrue. As a proof of the capabilities of the mine, I may state I have just referred to the sales book of the former company, and I find that in the last six months' workings they sold 290 tons of silver-lead, being an average of nearly 50 tons a month." Captain Kitto (late joint manager of the celebrated Laxey Lead Mines) says, "They form one of the best and safest investments in the whole mining district of Cornwall." He also writes, "I fully believe that with a moderate capital, combined with spirited and judicious management, this property will soon rank among the best dividend-paying mines in the county, and with these convictions I have no hesitation in recommending the same to the notice of mining capitalists, believing that they will be handsomely rewarded for their outlay."

About 18 months ago the sum of £13,000 was paid for these properties; since then about £16,000 has been expended in providing the mines with splendid new machinery, steam-engines, and mining plant of every description, and in necessary preliminary work, thus making a total of £29,000. The buildings on the property are of the most substantial character, and no expense has been spared in the outlay, as a reference to the inventory will abundantly prove.

Owing to the inability of the late company during the recent financial crisis to meet its engagements, the property was sold by the Stannaries Court. This company proposes to acquire the property from the present owner, who is willing to sell it for the nominal sum of £10,000, payable in cash and shares, which arrangemeut would give the benefit of the recent expenditure of £29,000, and, consequently, a saving of no less a sum than £19,000 to this company.

The directors of this company confidently believe that an opportunity so peculiarly favourable as this for investment in a *bona fide* enterprise but seldom occurs, and they have no hesitation in recommending it to the particular attention of mining capitalists as a first-class undertaking.

As no promotion-money will be paid to anyone, the preliminary expenses will be confined to the amounts necessarily disbursed.

The last sale of silver-lead ore realised £15 7s. 6d. per ton. This was raised by tributers at merely the shallow levels, and it is stated the ore becomes richer in silver with increased depth.

The mines will be placed under the practical supervision of Capt. Richard Pryor, of Redruth.

The capital of the company is £20,000, in 4000 shares of £4 each. The sum of 5s. per share is to be paid upon application and 10s. upon allotment, further calls will be made only as required.

Applications for shares are to be made by filling up the annexed form, and transmitting it, with the amount of 5s. per share, to the manager of the Metropolitan Bank, 75, Cornhill, London; or to the managing director, Mr. HENRY L. PHILLIPS, 32, New Broad-street, London.

The Memorandum and Articles of Association may be inspected at the offices of the company, where splendid specimens of ore from the mines, recently raised by tributers, may be seen, and prospectuses and forms of application for shares obtained.

Any further information can be had upon application personally, or by letter, at the offices of the company, 32, New Broad-street, London.

REPORT OF CAPTAIN RICHARD PRYOR, OF NORTH TRESKERBY MINE.

Redruth, Aug. 29, 1867.—In handing you my report upon these properties, I can, of course, do little more than speak generally as to the high opinion which is entertained of them by practical men; I may, however, mention that I have personally inspected the underground workings, and can endorse all that has been said as to the nature and character of the valuable lode which has yielded such large quantities of rich silver-lead. The district is, as you are aware, the best lead-producing one in Cornwall, and your mines are surrounded by the most celebrated and the richest lead mines which the county has produced; I may mention the Old Wheal Rose Mine, the Shepherd Mine, the Chiverton Mines, Retallack, Budnick, Golden, and several others, and there is, therefore, every reason to believe that Penhale and Lomax Mines will also continue to become more and more productive, and further support the character of this district for highly profitable results.

In the former working, some years since, the mines, as is well known, returned large quantities of silver-lead; at that time the price of labour, as well as the cost of materials, were much higher than now, while the price obtained for the ore was much less; therefore very great advantage must now be derived from these considerations alone, and as regards the future of the mines themselves, I have reason to believe that very large returns of ore will be soon made, for the deepest point yet attained appears to be the 90 fathom level, thus showing that the mines are comparatively in their infancy, and by driving the deeper levels, and getting under the old workings, I fully anticipate that a splendid mine will be opened up, and very profitable results accrue. As a proof of the capabilities of the mine, I may state that I have just referred to the sales book of the former company, and I find that in the last six months' working they sold 290 tons of silver-lead, being an average of nearly 50 tons a month.

The work which has been done at surface is of the most complete character, and the buildings are substantially erected. The pumping-engine is of ample power, and the machinery and mining plant of the most perfect description; in fact, everything that can be required is already upon the mines, and several thousands of pounds are, in consequence, saved to the shareholders, and at least a year and a half in the time necessary to perform the work here carried out; indeed, as you are aware, the late company has done almost everything except see the bottom of the mine, and as the engine is at this moment being worked in order to keep the water, you have only to fork about 10 fms. when you will see the 90 fm. level, and you can at once commence to open up your mine, and be making regular sales of silver-lead ore.

In conclusion, I may safely say that I question whether any company has ever come into possession of a mine in such good working condition as this, and where so much capital has been expended entirely for the good of the incoming proprietors; and as regards your chances of success, I think it must be evident to all who consider the matter, that seeing thel arge returns made in the last working, the splendid district in which your mines are situated, the exceedingly liberal dues (only 1-24th), and the shallow depth of the workings, there is every reason to look forward to a long and prosperous future, and I cannot but congratulate you upon the acquisition of the Penhale and Lomax Silver-Lead Mines.

EXTRACT FROM REPORT OF CAPTAIN KITTO.

Capt. JOHN KITTO (late of the celebrated Great Laxey Mines), in reporting for the late company, says:—

"I have been personally acquainted with the locality, and more particularly with the adjoining mines, for many years. * * * * These (Penhale and Lomax) mines are situate in the parish of Perranzabuloe, which has been, and still is, the best lead-producing district in the county of Cornwall; immense quantities of ore have been returned from these mines, and I believe they never looked better than at the time operations were suspended. * * * *

"The workings altogether are not extensive, considering the quantity of ore raised, but there is an immense deal of high ground still standing, which will pay well for taking away; the levels can be extended to any length, both north and south, and will undoubtedly be attended with the same satisfactory results. I have seldom, if ever, seen a better lead lode than this. The ground is easy for exploring, and at the same time little or no timber is required. The ore is of good quality, and can be rendered marketable at a very trifling expense. * * * *

"I cannot conclude these remarks without expressing my approval and high opinion of the property, and I consider the amalgamation of the two setts a step in the right direction, as together they form one of the best and safest investments in the whole mining district of Cornwall; and I fully believe that with a moderate capital, combined with spirited and judicious management, this property will soon rank among the best dividend-paying mines in the county; and with these convictions I have no hesitation in recommending the same to the notice of mining capitalists, believing that they will be handsomely rewarded for their outlay."

INVENTORY

OF THE VALUABLE

Machinery, Mining Plant, Stores, and Materials

AT THE

PENHALE AND LOMAX MINES,

In the Parish of PERRANZABULOE, CORNWALL, August, 1867.

ONE steam PUMPING ENGINE, 66 in. cylinder, with two 14 ton BOILERS, complete.
84 fms. pitwork, H piece, and windbores.
18 18 in. pumps, and 1 windbore.
10 12 in. pumps.
14 strapping plates for balance bob.
3 rod caps.
18 rod plates, assorted sizes.
2 8 in. bucket rods.
1 main rod, yellow pine, 53 ft., by 13 in.
1 bucket rod, yellow pine, 53 ft., by 13 in.
1 bucket rod, yellow pine, 54 ft., by 13 in.
1 26 in. steam whim engine and capstan, with 10 ton boiler, all complete.
1 shears, and 15 in. capstan rope.
1 shears to steam whim shaft, and iron chain (9-16ths).
2 2-horse whims, with shaft tackle and iron chain, complete.
1 bucking house and wood roof, 28 ft. long, by 29 ft. 6 in.
Timber floors adjoining ditto, 52 ft. long, by 16 ft. 6 in.
1 iron screw and frame.
1 wheelbarrow.
Skouts of timber for partition, 93 ft. long, by 5 ft.
Wood launders, 68 ft. long, by 5 ft.
Dressing floors, 27 ft., 28 ft.
2 new jigging machines, complete.
1 iron rake and box.
3 wheelbarrows, 3 trays.

IN THE CARPENTERS' SHOP.

1 carpenters' bench, 30 ft. long, by 4 ft. wide.
10 wheelbarrows, and 1 handbarrow.
9 new iron stave ladders, and 6 new ladder sides.
2 second hand jigging machines.
3 carpenters' chests.
3 new window frames and sashes.
1 new staircase window, complete.
2 nail boxes, and 1 2-gallon jar; oil tin.
1 carpenters' rope.
1 beam and scales, and stand, nearly new, 6 ft. long, by 6 in. wide.
5 iron weights, 56 lbs.
1 iron weight, 28 lbs.
3 large crowbars.
1 cross cut saw.
28 planks of timber, various sizes.
1 grinding stone and frame, 3½ ft. long, by 5½ ft. wide.
1 carpenters' bench, 15 ft. long, by 3 ft. 5 in. wide.
Iron bucket rods, 114 ft. long, by 2½ in.

IN SMITHS' SHOP.

2 lifting or dropping screws, 13 ft. 8 in., by 2½ in.
3 smiths' bellows, nearly new, 42 in.
3 smiths' anvils, nearly new, 2 ft. 9 in., by 6 in.
1 mandril.
2 smiths' horses, 3 smiths' vices.
1 iron jack.
1 smiths' crane and boring machine, and a quantity of smiths' tools and large iron work.
1 smiths' timber chest, 6 ft. 4 in., by 2 ft. 7 in.
Ditto ditto stool.
Scoring board and cupboard.
1 handscrew, quantity of new and old iron.
11 new picks, quantity of hammered iron.
3 new kibbles, and 4 second-hand ditto.
1 masons' stone barrow.
4 cog wheels for underground winch.
1 shime, 4 ft., by 4½ in.
1 new seating, staple, and glands, and 2 old seatings.

IN THE PITMEN'S HOUSE.

1 timber chest and cupboard, and sundry articles.
14 plank timber, frying pan, 20 lbs. yarn lashing rope.
1 screw stock, quantity new flange pins.
15 rests and taps, complete.
1 timberman's gig, and mason's kieve.
20 cwts. scrap iron.
3 new boiler plates, and 3 old ones.

IN THE STABLE.

1 stable wheelbarrow, several loads of stable dung, 1 ladder, 1 shovel, 1 pick, 1 brush.
1 corn chest, 1 pail, 1 box, 1 cupboard, 1 jar.
1 saddle stand, 1 set gig harness, 1 lantern, 1 rake.
1 hemp halter, 1 bridle, a good one horse cart.
1 set good cart harness, 3 empty boxes, and hammer.
21 planks and scouts, 1 water barrel.
8 iron blocks, assorted sizes.
2 iron blocks, underground.

IN THE GIG HOUSE.

13 sieves, and two copper bottoms.
5 shovels, 2 tackle ropes.
4 bucking irons, and 5 bucking hammers.
1½ ton old junk.
200 best Delabole slates.
New account house, not completed, poles and plank, as a scaffold.
2 water barrels, and 1 mason's hand barrow.
200 building bricks.
Lead floors, 21 ft. by 16 ft.
4 old window frames.
2 small iron stave ladders, old.
4 horse-whim kibbles.
3 large winches, nearly new.
1 8-arm capstan, 40 ft. span, with iron sockets.
3 new boiler plates, and three old.
1 new steam pipe, 6 ft. long.
1 timber ladder, 17 staves.
1 iron weigh bridge, complete, 9 ft. long by 7 ft., Bartlett and Son, maker, Bristol, pieces of granite cut for frame.
2½ cwts. bal powder.
79 coils of safety fuse.
1 water wheel, nearly new, 14 ft. high, by 4 ft. breast, and pumping gear, complete.
1 wood ladder (18 staves), 1 ditto (9 staves).
1 timber house, 8 ft. long, 6½ ft. wide, containing chest, bench, oil can, grease pot, and grate.
2 launders, for carrying water to the wheels, 29 ft. 9 in. wide, 2 ft. 2 in. deep, 2 in. plank, and iron bolts.
2 pieces of timber, 1 ft. square, and 1 9 in. square.

IN THE ACCOUNT HOUSE.

2 grained office desks with drawers, and office chairs.
1 letter copying press, new brass sample scales and weights, eight-day time-piece, and complete office furniture, with stationary, &c.

IN THE MATERIALS HOUSE.

3 Scouring bricks, 1 bass broom.
1 deed box or tin case, 1 empty tin.
3 new lanterns, 12 quires stout brown paper.
1 best cocoanut matting, 2 miners' hats.
1 oil tin and tin funnel.
21 powder cans.
1 whitewash brush.
30 pick hilts, safety fuse.
41 new shovel hilts.
1 shovel, 1 handle.
3 washtubs.
1 four gallon oil jar, 1 new boiler.
1 oil can, 1 mantle piece.
1 bag of nails, 1 bag barrow nails, ditto 3 inch, ditto 4½ inch, ditto 3 inch, ⅛ cask roof nails, 2 cwts. anti-friction grease.
1 beam and scales, small size.
1 tin linseed oil (say 3 gallons).
8 new shovels, 1 empty oil tin.
1 patent scales, weigh 200 lbs.
2 cwts. sheet lead.
Miners' candles, small quantity.
1 large candle box.
1 tackle rope.
1 hand-saw, nearly new.
17 miners' chests.
1 engineers' chest.
40 fms. chain connected to capstan rope, and sundry other chain underground.
1 large deal table.

The erections upon the mines compri se two very substantially built engine-houses, boiler-houses, carpenter s and smiths' shops, materials, and pitmen's houses, stables, &c.; and there are also about three-quarters of a mile (or say 600 fms.) o f iron pipes (laid down at a very great expense) for the purpose o f bringing in pure water for the boilers.

The work done at the mines, includi ng the machinery, materials, and stores specified above, has cost the late company about £16,000. The sum of £13,000 was, in addition, also recently paid for the leases, &c., making a total of £29,000.

REGISTERED OFFICES,—32, NEW BROAD STREET, LONDON.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

THE DOUBLE-SHIFT SYSTEM.—"C. D." (Renfrew).—The pamphlet to which reference was made in last week's Journal is not published in London; a copy could, however, no doubt be obtained by addressing Messrs. Nixon, Taylor, and Cory, Cardiff. The price is not stated on the copy sent to the Journal.

DOUBLE-SHIFT SYSTEM.—That an Act of Parliament would be required to secure the introduction of the Double-Shift system I have no doubt; but I think it should do no more than render the adoption of the leading principles compulsory, leaving the viewer at each colliery to carry it out to the best of his judgment. It would suffice, I think, to enact that no man employed in hewing coal in a fiery colliery shall be permitted to set timber, fire shots, or do any work other than cut the coal and fill it; that separate men shall be employed as timbermen, wastemen, &c.; and that gunpowder shall not be used in any pit in which safety-lamps are employed. It seems to me that the advantage of the Double-Shift system does not so much depend upon the fact of there being fewer men in the pit as upon the division of labour, facilitating the employment of competent men continuously at one kind of work.—H. F. C.

DOUBLE-SHIFT SYSTEM.—As Mr. Nixon and others appear to entertain such a high opinion of the Double-Shift system, I should be glad to learn the chief objections to it. Would it be applicable in all cases and with equal advantage wherever the Single-Shift system is now used. In the Yorkshire district, for example, they go down at Six in the morning and come to bank again at Two in the afternoon, the pit remaining idle 16 hours out of the 24. Would Mr. Nixon employ only the same number of men, sending in one-third at Six A.M., one-third at Two P.M., and one-third at midnight. If so, I do not think the men would object, but if three times the number of men are to be employed it would never do. Firstly, we could not get the men; and, secondly, if we could, we should raise more coal than we require or could find a market for. How would Mr. Nixon deal with open places at present existing? Could two-thirds of them be laid idle without danger, or could each one-third of the working places be wrought in turn? I do not see, but wish Mr. Nixon to explain, how the system can be applied to *existing* collieries.—N. J.: *Barnsley.*

ELECTRIC SAFETY-LAMPS.—An article was inserted some time since in the Journal describing an improved lamp for miners, invented by Messrs. Dumas and Co., and consisting of Giessler's tubes illumined by electricity. As the ignition of fire-damp by such a lamp would be absolutely impossible, I have often wondered why they are not generally adopted. Could any of your correspondents inform me the price of the lamps, and the cost per day of keeping them in order—*i.e.*, of supplying them with electricity?—L.: *Merthyr.*

THE COAL TRADE.—According to the return of coal export, as published in the "Mining Records," the quantity of coals exported from this country to foreign countries in 1866 would be, in round numbers, 10,000,000 tons. I am desirous of ascertaining what proportion of this may be sent to foreign ports for use of British steamers, &c. Such is the case, I believe, and it affects the question of quantity exported for foreign use only.—B.

MANGANESE.—Would you oblige me by inserting the following questions as to the deepest point manganese has been worked in England and Wales—whether, as a rule, it increases in ratio in depth? Being engaged in raising manganese from the surface, and it being a general opinion that manganese is never found at any great depth, I should feel thankful if any of your correspondents having been or at present engaged in similar pursuits would enlighten me upon this subject.—AN INQUIRER.

CRUSHING LEAD ORES.—Will any correspondent oblige a subscriber by informing him what is the best hand crushing machine for crushing lead ores, and the address of the maker?—A SUBSCRIBER.

MINING FIELDS OF THE WEST.—In thanking you for the insertion of my letter in last week's Journal, I beg to observe there is an error, which I will thank you to correct. The opening of the letter should read thus:—"Mr. Charles Thomas, in his interesting pamphlet, with the above title," instead of "in his interesting paper in last week's Journal." I hear, with pleasure, that some highly respectable parties in Cornwall have become interested in assisting to develope the lodes in the rich Penrose district.—HELSTONIAN.

APATITE.—Can any reader inform me whether the "apatite" has been found in England in any quantities, and, if so, in what localities? In America and in Canada it has, I believe, been found in considerable quantities. I presume the apatite is found in veins or lodes, similar to mineral productions, but on a larger scale.—A SUBSCRIBER.

QUARRY REPORTS.—To do justice to Dr. Bower, the quotation in last week's Journal out of his book on slate quarries should have been—"A practical, honest quarryman knows more of the appearance of the genuine laminating slate rock, and of its most promising features for every working purpose, than all the members of the Geological Society put together."—CHWARELWR.

WANTED,—The address of the owners or agents to the Norway Mines of Iron Pyrites;—also, the address of the proprietors of the Varaldso Mine, mentioned in the letter of Mr. J. Phillips in the Journal of Jan. 4.—J. H. W.

MANUFACTURE OF GOLD-BEATERS' SKIN.—"J. M." (Dolgelly).—This substance is the serous membrane separated from the intestinal tube of the ox and other animals; it is hammered to reduce its thickness, and prepared to resist putrefaction. The number of makers is very limited, and its manufacture has been said to be a secret which only five men in the world now know. The art of preparing it has brought a fortune to the manufacturers. Wickstead, of London, attained the highest perfection in the art in the last generation, and promised to leave the secret to a relative at his death-bed. In his dying gasp he called his relative to his side to open the mystery, but died, and it remained still a secret. F. Puckridge, of London, is the most celebrated maker now. With great perseverance and expense he succeeded in perfecting the art. He has promised to reveal the secret to his nephew. The thinnest gold leaf of French manufacture is not thicker than the four hundred and eighty thousandth part of an inch; that of the English is about the three hundred thousandth part.

PORT PHILLIP AND COLONIAL GOLD COMPANY.—A Shareholder complains of the paucity of information contained in the last report compared with the ample details formerly furnished. He also considers that the dividend should be 3s. per share—2s. now, and 1s. the latter end of February.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JANUARY 18, 1868.

PREVENTION OF ACCIDENTS IN COLLIERIES.

As much attention is just now being paid to the question of the safe working and proper ventilation of our mines, the following extracts from a lecture delivered a few days ago by Mr. WILSON, the viewer of Darfield Main Colliery, near Barnsley, and so well known in connection with the experiments made during last autumn with regard to the safety-lamps in use, may not be out of place. It may be stated that Mr. WILSON, as a thoroughly practical man, of great experience in the Northern as well as in the South Yorkshire coal fields, holds that the strictly carrying out of the first general rule of the Act 23 and 24 Vic., c. 151, would have prevented most of the fatal accidents which have occurred of late. That rule states that, "an adequate amount of ventilation shall be constantly produced in all coal mines or collieries, to dilute and render harmless noxious gases," &c. If the gases were so treated, of course no explosion could take place. Mr. WILSON says:—By taking advantage of the leading principles of ventilation, we get off the gases as fast as they are made and given off. Carbonic acid gas, familiarly known to the workingminer as stythe, choke-damp, and black-damp, contains nearly three parts out of four by weight, of oxygen, the life-supporting element; yet, as it is combined with another substance, carbon, the result is a poisonous gas, and dangerous to life. To breathe air containing 8 per cent. of it is dangerous, seeing as by that admixture lights are extinguished. Carburetted hydrogen gas is the fire-damp of our collieries, containing one atom of carbon with two of hydrogen, and producing one volume of fire-damp. The specific gravity of the gas is 562, that of air being 1000, so that the fire-damp being lighter than air, it lodges in the roofs of mines until mixed with the air. When mixed with five its own volume of air, it may be breathed for some time without serious injury. After explaining the nature of other gases met with in collieries, and the means of rendering them harmless, Mr. WILSON proceeded to notice the safety-lamps which from time to time have been introduced. Early in the last century, he said, Mr. SPEDDING introduced a steel mill, by which the dangerous parts of mines were to be safely lighted by the steel, from its coming in contact with a flint, but it is needless to state that it at times brought on the very danger it was intented to avert. HUMBOLDT, in 1796, introduced a lamp which would burn in a foul atmosphere. It was isolated not only from the explosive gas, but from the atmospheric air, and would, consequently, only burn when the air within it was unconsumed. CLANNY, however, appears to have been the first to enter into a contest with the destructive element, and devoted upwards of 30 years in experiments. In 1812 Mr. J. J. WILKINSON, of the Temple, in conjunction with the Bishop of DURHAM (Dr. GRAY), Sir RALPH MILBANKE, Dr. CLANNY, and others, formed a society for the prevention of accidents in mines, which was productive of beneficial results; it was at the special invitation of this society that Sir HUMPHRY DAVY visited the North. In 1813 Dr. CLANNY invented a lamp which burnt safely in fiery atmosphere, but, like HUMBOLDT'S, it had to be isolated. It was not until after DAVY'S introduction to BUDDLE that anything practical was done, and it was Dr. GRAY through whom the introduction took place. Sir HUMPHRY DAVY, having visited the northern coal mines, experimented on the Clanny lamp, and, after having visited the Wallsend Colliery, returned to London with Mr. BUDDLE. This would be in the year 1815, and shortly after Mr. BUDDLE received from DAVY the safety-lamps with wire-gauze cylinders. In the same year Mr. STEPHENSON, at Killingworth Colliery, brought his lamp, which, with some improvements, still maintains its position. The object of the lamps being to show the miner the presence of a dangerous accumulation of fire-damp. The lecturer next proceeded to notice that branch of the subject of such importance to the miner:—

"Fire-damp, or light carburetted hydrogen, contains nearly 25 per cent., by weight, of hydrogen. Hydrogen is the lightest known gas, being only 1-14th part the weight of air. The hydrogen in fire-damp is, however, condensed into a smaller volume than it occupies in a free state. The presence of fire-damp can be detected by the candle-flame when there is 1 part fire-damp to 30 parts air. When the fire-damp forms as much as 1 part out of 13 of the air, the mixture becomes explosive, so that if ignited by an exposed flame, the whole of the mixture would be converted into a mass of flame. In this state of the mixture, however, the force of the explosion is comparatively feeble. When there is only from 9 to 10 times as much air as fire-damp, the explosive force is greatest. If the proportion of gas be greater than 1 part out of 9 or 10 of air by volume, the force of the explosion gradually becomes less and less, until there is only five times as much air as gas. When the mixture will no longer explode, but, on the contrary, extinguish the flames of candles or lamps that may be brought into it, he had seen a large quantity of this gas lighted, and very little damage done. Before explosion there may happen to be present either an excess of air or of fire-damp beyond what is necessary to cause an explosion; and if so, they will remain mixed with the after-damp in an unchanged state after the explosion has taken place. There never can, however, be such an excess of air present as to render the after-damp fit to breathe, or the explosion could not take place—the limits are such that this is impossible. Now, since explosions cannot be prevented, how important it is, then, to be prepared to mix and dilute the after-damp with fresh air in as speedy a manner as possible after their occurrence. If there is more fire-damp present than is chemically changed by an explosion, the force of the after-damp resulting is more deadly than if an excess of air had been present at the time of explosion. The destruction to human life occasioned by fire-damp is a matter of painful importance, and no opportunity should pass without using it to the best of our knowledge for the purpose of devising means of safety against such fearful sacrifices. Having named the most recent colliery disasters, and mentioned the many circumstances which are from time to time referred to as the probable cause of these calamities, he observed that the mode of working at one colliery will not suit another. You find a bad top at one, a good top at the other; you shall have many faults at the one, and none at the other. To comprehend properly, it is necessary to understand these things, as they are often charged with gas, and are great obstructions to working of the air. Then we have a pit with a heavy rise, another with none. In the working of long work it is a common thing to set up the banks at the lowest level, under such circumstances it is no uncommon thing to find large accumulations of fire-damp lodged in the fallen goaf close to the workmen, even where a good current of air is passing along the face. This awful state of things is not unusual under such circumstances, and will continue to be, so long as working on the rises, if the coal and the strata naturally ascend and accumulate close to the men. So that in all cases you have the workmen all working at the top or high part of the goaf, the gas makes its way out of the same and mixes with the air."

CONTINENTAL IRONWORKS, AND SCIENCE TEACHING.

The leading conclusions at which Mr. SAMUELSON had arrived from his inspection of the continental ironworks has been already referred to, and showed that his confidence was strong that the ground our ironmasters and engineers had lost would be recovered, unless a return of prosperity should lead to a renewal of the contentions between masters and workmen. The workmen must not think that iron and steel can be produced in this country in quantities and of a quality which can be equalled nowhere else. Sheffield men should visit their 8000 brethren at Messrs. KRUPP'S, who are producing annually more than twice the entire export of steel from the United Kingdom. In the manufacture of this 60,000 tons per annum, 800 or 1000 tons of coal are consumed daily. The machinery is complete in every department. They would there see amongst the numberless railway wheels, tyres, and forged cast-steel cranked axles in process of manufacture, one of enormous size for a Transatlantic steamer building at Grenock, and several steel hoops for the Elswick Gun Factory. They should then inspect the great iron and steelworks of Hoerde, employing 4500 hands, whence puddled steel sheets, some of which are exported to Liverpool for shipbuilding purposes. At Esslingen, in Wurtemburg, they can see a number of locomotives in course of construction, forming part of a contract for our Indian railways, the engineers of which have expressed their entire satisfaction with the workmanship and materials.

The contracts have been taken by these foreign engine builders, notwithstanding their disadvantage in being required to use English iron in a portion of the work—a stipulation which Mr. SAMUELSON did not regard as necessary, and which Russian engineers have not enforced of the same firm in an order for some 54 locomotives, for use upon the South Russian railways. Yet at Esslingen coal is three times as dear as in Manchester, Leeds, or Sheffield. At the works of the Terre Noire Company can be seen in detail the manufacture of Bessemer steel from the iron as it flows from the blast-furnace, a simplification of the Bessemer process, attended with so much economy that the Terre Noire Company are supplying one of the great French railways with 20,000 tons of steel rails at a price below their prime cost in England, and this in spite of comparatively dear fuel and ores. The education of the boys is confided to one of the many national establishments in France for educating the people in scientific and technical knowledge—that of Freres des Ecoles Chretiennes. Whilst the Orleans Railway Company take all the superior technical officers employed in the production of their railway plant—and they own 1200 out of the 4000 running upon the French railways, and employ 1800 mechanics of various trades—from the leading science schools of France, such as the Ecole Polytechnique, the Ecole Centrale, or one of the Ecoles des Arts et Métiers, the children of the working population attracted to the plant works over which these officers preside are educated in the municipal primary schools.

EDUCATION IN THE MINING DISTRICTS.

A great deal is now being written and spoken upon the question of primary as well as technical education, and it is impossible to say too much upon the subject. There is an imperative necessity for its enforcement in this country. Much is likewise being said of what the newly-enfranchised people will do to secure certain class representation. But no one has hit the mark so closely as Mr. GEORGE DAWSON, who, in his peculiarly quaint style, said that the working-classes of Birmingham were, he was told, going to send a working-man to Parliament, and give him 500*l.* a-year. They would never do it in his time. He knew one or two manufactories where they could raise 500*l.* in a fortnight easily if they chose, but they would not do it. There was a higher duty than that—it was that of drinking beer. The French artizan was wonderfully saving, and lived for nearly six months on what a Birmingham man would spend in a fortnight. He had learnt from the Exhibition that unless the workpeople of this country were better educated their doom was to go down before the German and Frenchman. The toe of the German was now upon our heel, our heel was a little too heavy with beef and beer, and unless very quickly the Englishman were educated the German would pass him. Employers have provided schools of their own in some instances, and in others are the leading contributors to district schools, and sometimes, as in Staffordshire, offer prizes to boys to induce them to continue their education after leaving the day-school; and this, although the results have not been satisfactory. The habit to which the parents have become slaves has stopped them in their onward progress, leaving them to become the dupes of designing agitators, and the cause of wretchedness and poverty.

Our system of primary education is altogether defective. Out of more than 2000 in the earthenware, colliery, and iron districts of North Staffordshire only 26 per cent. can read. In 19 cotton factories of England only 63 per cent. of the 8000 children can read. In Manchester, out of 1660 young persons, from 12 to 20 years of age, about 759 cannot read. "These facts," as Mr. W. E. FORSTER observed, "are simply humiliating." Place them by the side of the statement of Mr. MUNDELLA, President of the Nottingham Chamber of Commerce, and they are still more humiliating. In Saxony, children from six to fourteen years of age attended the public schools to the extent of one-sixth of the population. Ignorance was not to be found in that country. Every child he met, from nine and ten years upwards, could read and write well, clearly and intelligently. This state of things was brought about by an attention to its duty on the part of the Government of that country which has not been displayed by our own Legislature. The 609,000 children were taught by 4000 certificated masters. The English Government must no longer treat this question in an incomplete manner, as hitherto. There must now be good schools, aided in their management by private individuals, supported by a rate to cover the chief cost of their maintenance, and supervised by national Government Inspectors, whose claim to inspect shall arise from the school being aided by national funds. The machinery provided, the material required to be operated upon must not be kept back. Parents must no longer be allowed to inflict a legacy of ignorance upon posterity. The great reform which the mass of artizans needs must come from within itself. It is satisfactory to observe that so popular a leader as Mr. FORSTER is now prepared to enact more stringent measures than those suggested last session. With schools established in every district, and every parent compelled to educate his children, we may look for fewer disgusting details in our courts of justice.

TECHNICAL EDUCATION FOR MINERS.

Nearly nine years have now elapsed since the Miners' Association of Cornwall and Devonshire was inaugurated; and, as the success which has attended the effort thus made to provide technical schools for miners may afford some information from which to judge of the probable results to be anticipated from the technical education of the working classes generally, some account of their present position will not be uninteresting. These schools owe their origin to Mr. ROBERT HUNT, F.R.S., the keeper of Mining Records at the School of Mines; and in his introductory report of the annual meeting he observes that—

"It cannot but be satisfactory to those who have contributed to support the Miners' Association in the condition of usefulness which it has for several years maintained to know that, by their liberality, much good has been achieved. At the present time considerable discussion is taking place on the question of technical education—that is, education in the practical application of such branches of science as may bear directly on any special industry. It must not be forgotten, that Cornwall has taken the initiative in this matter, and that for nearly ten years this kind of instruction has been given to the working miners of this county and Devonshire. That the advantages have been appreciated by the class for whom this institution was intended is proved by the fact that numerous young miners who have availed themselves of the instruction given in the classes of the Miners' Association have secured for themselves, both at home and abroad, positions of responsibility, which they could not have taken but for their advanced knowledge; that a working miner has succeeded in obtaining the gold medal in mineralogy of the Department of Science and Art—that is, he has been first for the whole kingdom; and, although the medal is not necessarily awarded to the first, yet his examination was so highly creditable that the Department awarded to him their highest honour; and that this year, out of 29 successful candidates in mineralogy, 20 had obtained their instruction from the teachers of the Miners' Association.

"Practical mining is not taught in the classes, but the association uses every means to encourage the study of all the processes connected with mining operations, and to cultivate exact observation of all the phenomena presented by the mineral lodes and the enclosing rocks. Out of 26 students from all parts of the kingdom who passed the examination of the Department of Science and Art in mining, 12 of them were pupils of the Miners' Association. If the means of the Miners' Association had admitted of the formation of classes, in which mechanics, mechanical drawing, dialling, &c., could have been taught, this number would have been greatly increased. In addition to the assistance given by the teacher to the young miners desirous of acquiring knowledge, he now instructs them in mineralogy, chemistry, and the use of the blowpipe, and incidentally in geology, the association furnishing books and blowpipe apparatus at very reduced prices to all members of the classes.

"Anyone studying the present position and the future prospects of tin and copper mining must be convinced that the only hope for continuing them with advantage to those concerned rests on the improvement of processes, and the consequent economy in every direction, both in the mine and on the dressing-floors. No improvement of any value can be made without the aids of science. It becomes, therefore, more than ever essential that everyone who desires the advancement of the mining industries of Western England should aid in the extension of that kind of knowledge from which alone any real progress can be anticipated."

Now, if Mr. HUNT can report thus hopefully upon the result of his efforts in so limited a sphere as the two western counties, what might not be anticipated from similar exertions throughout the manufacturing districts, and what better proof than the success of the Miners' Association of Cornwall and Devonshire could be afforded of the ability possessed throughout the kingdom for supplying all the technical education required, without the necessity for Government interference?

The report of the meeting embodies papers "On BERGSTROM'S Boring-Machine," now in use at the Perseberg Mines, Sweden, and "On the Rock Boring-Machine used at the Altenberg Zinc Mines," by Dr. C. LE NEVE FOSTER; "Remarks on Boring-Machines," by CHARLES FOX; "On Tunnelling by Machinery," by Gen. HAUPT: "On High-Pressure Steam-Boilers," and "On Jordan and Darlington's Hydraulic Mining Machinery," by T. B. JORDAN; "On Beaumont and Locock's Tunnelling Machine," by Capt. H. LOCK, R.E.; "On the Perseberg Iron Mines," by Dr. C. LE NEVE FOSTER; "On an Excursion to the Chiverton District," by FRANCIS OATS; on the same subject, by WILLIAM ARGALL; "On Vestiges of Ancient Tin Workings in the Looe Pool Valley," by R. J. CUNNACK; "On the Occurrence of Wood Tin at the Great Wheal Vor," by G. M. HENTY; "On the Calamine Deposits of Sardinia," by F. G. DAVIS; "On Hydraulic Apparatus as Motors," and "On Transmitting Motion in Mining Operations," by JOAN DARLINGTON; "On the Boring-Machines exhibited, or described, at Falmouth (a tabulated account thereof)," by Dr. C. LE NEVE FOSTER; "On Brunton's Rock Tunnelling-Machine," by J. D. BRUNTON; and "On the Use of Doering's Boring-Machine at Tincroft Mine," by Dr. C. LE NEVE FOSTER. The papers are illustrated, when necessary to their elucidation, by suitable engravings and woodcuts, so that the whole forms a useful and readable volume.

THE SOUTH WALES COLLIERY PROPRIETORS.—Arrangements are about to be made by the principal colliery proprietors of this district to hold a meeting for the purpose of discussing the most equitable and effective mode by which a rate can be levied for the support of sufferers by colliery accidents of all kinds, when they are partially or wholly disabled, and for the maintenance of their families when the cases terminate fatally. It appears that some diversity of opinion exists as to the precise mode of carrying out this scheme, which is generally admitted to be a desideratum. Mr. VIVIAN, M.P. for the county, Mr. NIXON, Messrs. DAVIS, the proprietors of the ill-fated Ferndale Colliery, and other leading colliery proprietors, have already expressed strong opinions in favour of Government adopting some scheme which would make due provision for the bereaved families, so as to avoid the impost on the parishes to which the unfortunate people are chargeable, or continual appeals to the charity and sympathy of the public. Whether the proposal takes the shape of a rate levied on the quantity of coal that is produced, or in proportion to the number of men employed, or on some other tangible principle, is not at present clear. Mr. NIXON and Mr. VIVIAN are also greatly in favour of adopting the "Double-Shift" system, as in work in the North of England, and which has the effect of materially reducing the number of lives lost in case of an explosion taking place. Mr. WALES and Mr. BROUGH, Government Inspectors of Mines, have called attention to the large number of lives lost in collieries by other accidents than those which are caused by explosions. The loss of life by falls and others of the many casualties to which the collier is exposed, form a still more formidable list when taken in the aggregate. For instance, four lives were lost in the pits in the immediate neighbourhood of Aberdare last week; the names of the dead men being MORRIS, THOMAS JONES, TITUS LEWIS, and EDWARD PRENDERGIST, who all lost their lives by "falls." Such accidents as these are of every-day occurrence, and although the mortality is swollen by units and tens, instead of by hundreds, as in the case of explosions, the annual return of deaths from such accidents is excessive. Hence the imperative necessity for some permanent national fund for the relief of the sufferers. The question it is expected will be brought forward in Parliament next session.

CONSUMPTION OF SMOKE.—The proprietors and managers of the Shelton Bar Ironworks, Hanley (Earl GRANVILLE'S), have addressed themselves to the practical solution of the difficulties connected with the prevention of the smoke nuisance. They have turned their attention, first of all, to that particular nuisance, the abatement of which is, by common consent, admitted to be the easiest of accomplishment, and which, therefore, the local authorities of the district have had the least hesitation in requiring shall be abated without further delay. We mean the smoke generated by the fires of engine-boilers. In the first instance, two doors were fitted up on the Smedley principle, with this difference, however, that the door, instead of being made self-acting by attachment to clockwork, is regulated by the fireman, by means of a weight, pulley, and chain. It was found that though these doors answered very well indeed, they were unnecessarily expensive (costing about 5*l.* each), and that they were susceptible of improvement. Accordingly, three other doors were fitted to as many furnaces, and these were made on the following principle:—Instead of movable, horizontal bars admitting the external air into the furnace, through a grating of heated upright bars, there is a balance-door for the admission of the air, which by means of horizontal louvre bars is driven straight upon the fire. The managers find that as the fireman must always be in attendance on a suite of boilers, there is nothing whatever gained by making the doors automatic, because by touching the balance weight he can set the door to any angle for the admission

of the air current; and, further, that by fixing the internal range of bars on the louvre plan the fuel receives the full force of the oxygen, the smoke-prevention agent, pouring in through the opened door. It is also found that a door on this principle may be made for about a sovereign; and its operation is generally considered to be so satisfactory that it is to be applied at once to all the engine boilers which are used on this immense establishment. It has always been felt that the china and earthenware manufacturers would have great difficulty in preventing the emission of smoke from their ovens, but it now appears that this difficulty may be overcome. Messrs. JAMES EDWARDS and SON, extensive earthenware manufacturers, of Burslem, have applied to one of their ovens and to all their kilns and boilers DIX'S patent smoke-consuming door, with the following results in the case of the ovens:—That no smoke is produced after the first lighting of the fires; that 1 ton of coal per oven is saved; that the length of time required for firing an oven of ware is reduced by two hours; and that the heat can be regulated with the greatest nicety, and thus much ware saved from being rendered worthless by over or under firing. The cost of each door is about 3*l.* 3*s.* In this case the principle of louvre bars has been adopted, and they are so worked by means of a vertical lever that the supply of air may be regulated at pleasure. The success of this plan is felt to be of vital interest to the trade.

REPORT FROM SCOTLAND.

JAN. 15.—On Monday the Pig-Iron Market was depressed by heavy selling, the speculators for a rise being unable, or thinking it imprudent, to hold longer, and a slight decline was established. Yesterday the market was steady, at 52s. 1½d., closing, buyers, 0½d. a ton less, cash in 14 days. The sales are small, when compared with the make, and the shipments for the week are only 5580 tons, against 5810 tons same week last year, which is a decrease of 1730 tons till date. At the market to-day a large business was done at reduced prices—52s. to 51s. 8d., a month open and fixed; 51s. 10½d. to 51s. 8d. cash, buyers requiring a reduction of 0½d. a ton at close; Gartsherrie, No. 1, 57s.; Summerlee, 55s.; No. 1, g.m.b., 52s. 3d.; No. 3, 51s. 3d. Finished Iron is difficult to sell, as the cheaper makers have not yet announced any reduction; and although there is a very general talking of reducing workmen's wages 10 per cent. all round, it is simply talk, and nothing more. This week all the makers have commenced operations, but they are not in high hopes of reaping the fruit of their doings. The Welsh people seem prepared to take orders at any price, and so are absorbing a portion of the work which was formerly done here. The only bit of silver lining on the dark cloud is the fact that ship-iron for Clyde builders is keeping in good request, at the higher prices. It is also reported here that the plate-iron made at Parkhead Forge, by the Richardson process, is of enhanced value, and bore an excessive pressure when tested in Napier's works. Numerous enquiries are being made at the patentee's as to its practical utility, and we hear that makers about Coatbridge, and in various parts of England, are about to test the process for themselves. Quotations of finished iron are unchanged. The ironmoulders have wisely commenced operations at the reduction in wages agreed to by the masters, and have also granted the other reasonable concessions as a necessity.

Coals for shipment are being disposed of to a full average extent, coalmasters meeting buyers on very liberal terms, in order to keep their pits going, and their hands in employment. With lower prices (1s. a ton), pretty large stocks, and a very restricted demand, we regret to learn that some of our coalmasters are seriously contemplating closing some of their pits for a time. In their present condition a trifling reduction in wages will hardly be of service; and if the men, where a reduction is offered, are stupidly led into a strike, they may have to stand "idle in the market-place" far too long either for their own or their families' good. On Monday a great district meeting of miners was held here, to listen to the wisdom which issues from the lips of the sage M'Donald, and to once again touch the hem of his garment. At a meeting held in Wishaw, he told the miners that he would take stock throughout the district, and then tell them what to do. In Glasgow he dissuaded the miners from immediate resistance to the reduction of their wages, but counselled them to organise themselves for effective action on an early day. After having been thanked for attending the meeting, Mr. M'Donald very naively noticed that he had grave doubts as to continuing to "take the place he had taken among them." He had not been fêted since his return from his tour through the western hemisphere, and there are grave doubts entertained here if the above stroke of policy will not bring it out. Since M'Donald's trip to the States, of course the miners have got disorganised; when they get themselves again re-organised to his liking, he will let them know what shifts to make next. In order to show that something can be done in the meantime, the pits of one firm have been struck, and the miners in the district are saddled with a tax of 1s. per week each, to keep these men in pocket-money and idleness till the "bull" is withdrawn. So the matter stands, with oft-repeated meetings, which are so much alike that one is an epitome of them all. The shipments of coals from the Scotch ports for the week were 27,430 tons; for the same week in 1867, 25,460 tons.

The tenant's right to a lease for 16 years, from Candlemas next, of a going colliery and oilwork at Bathgate, was exposed for public sale here last week at 4000*l.*, without finding a purchaser.

Paraffin oil quiet, at from 1s. 1d. to 1s. 3d. a gallon. Trade has been very unremunerative all last season.

The Caledonian and North British Railway Companies, through committees of their directors, have been negociating for some time together, so as to come to terms of agreement for a long period, by which both companies would have a joint purse, and gross revenue returns. If this arrangement is carried out it is expected to prove of the greatest value to the shareholders of the contracting parties, and will include the postponement of a large amount of new works, which might not greatly benefit either company when completed.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 16.—Since the quarterly meetings a few orders for Iron have been given out, but they do not alter the position of the trade, which is one of extreme dulness. The tone of the meetings at Birmingham and Wolverhampton last week was depressed, and there is a good deal of talk of blowing out blast-furnaces. The South Staffordshire trade is waiting to see the course which will be taken by the North Staffordshire ironmasters as to the reduction of wages, and should the latter carry it out, as they say they will, it seems plain that the South Staffordshire must follow, unless all the weak firms are to be driven to the wall.

Meetings of the puddlers and of the millmen have been held in North Staffordshire to consider the course they will pursue in case of the reduction of wages being carried out, with a view to which notices have been given. At both meetings it was urged that no reason existed for reducing wages in North Staffordshire which did not apply to the South of the county, and a manifestation of resistance was offered. The puddlers, however, appointed a deputation to wait upon the masters, and report to another meeting. The millmen adopted a resolution declaring their intention of resisting the reduction, but they adjourned the meeting. In truth, the men are now prostrate, and resistance to any extent seems very unlikely.

The failure of Mr. Henry Bennett, ironmaster, of Wombridge, near Wellington, Shropshire, is announced. Mr. Bennett chiefly made wire-rods. His creditors are principally makers of pig-iron.

The adjourned inquest in the case of the sad explosion at Homer Hill Colliery, Cradley Heath, so far as the deaths of nine of the twelve men who died by that accident, closed on Tuesday. Mr. Docker, Worcestershire coroner, conducted the enquiry, and Mr. W. H. Phillips, Staffordshire coroner, sitting with the cases of the other three men who died in this county. Mr. Baker, Government Inspector of Mines, attended, and Messrs. Breakwell and Tetloe were present as a deputation from the Miners' National Association, and asked many pertinent questions during the enquiry. A full account of the accident has already appeared in the *Mining Journal*, and the evidence fully confirmed the correctness of the general conclusions arrived at on the place being examined after its occurrence. Mr. Baker had prepared an elaborate report, a portion of which was given in evidence at the close of the enquiry. The workings in which the explosion took place are in the 10-yard seam of coal. There was an extensive opening at the back of the workings from which the coal had been extracted. The explosion took place on Nov. 11, in the morning, and, no doubt, just before the accident there was a fall of earth in the old workings, which the Inspector estimated at from 200 to 300 tons, and he had no doubt that this fall drove the gas from these old workings to the candle of one of the men working near. Mr. Baker said these old openings were very extensive, and he attributed it to that circumstance, and to the intervention of a large pillar, that every man in the mine was not killed, the vast space in the rear affording room for the expansive force of the gas to expend itself to some extent. He also noticed that whilst the barometer had been steady for a week before the accident; on that morning there was a depression of about 1-5th inch, and this would probably cause an increased emission of gas from the coal, and would tend to cause any gas in the opening to be forced outwards to the flames of the men's candles. When he visited the mine on the morning after the accident he found "a large quantity of gas evidently issuing from a fissured and very soft part of the coal seam." It was shown by several witnesses that prior to the accident, and specially a week before, gas had been found in the upper part of the old workings, and had been brushed out. On that day the examination of the mine with the lamp previous to the men beginning work was entrusted to a man named Hodlington, by the deputy, Edward Foley. On the morning of the fatal occurrence Foley himself made the examination; unfortunately, however, his lamp-stick was broken. He fixed the lamp on a pricker, but could not reach the roof, which was at least 30 feet high, within some 5 feet, and from sounds which he thought indicated an approaching fall of earth, he feared to go far into the old workings. He had made application for a new lamp-stick, but had not received it. Possibly, had he been able to raise his lamp to the top, he would have found gas, and precautions would have been taken which might have saved the 12 lives sacrificed. Mr. Baker said that, allowing for leakage, about 8000 feet of air per minute was passing through the mine, which kept the actual working places clear, but he suggested that, under the circumstances, it would be well to increase this amount. He said the plant was a very good one. The jury returned a verdict of "Accidental Death," but censured Foley, the deputy, for not making a more complete examination, and also for having, on some occasions, delegated the examination of the pit to a man so ignorant as they considered Hodlington to be. The coroner thanked the jury, the Inspector of Mines, and the deputation from the Miners' Association, for the assistance they had rendered, and said the manner in which the colliery was appointed showed that the proprietors were anxious to do all they could to ensure the safety of the workmen.

This case illustrates one great danger in the case especially of such thick seams. With vast spaces in the rear in which gas may accumulate, and which it is really dangerous to enter, from frequent falls, it is very difficult to avoid the risk of gas accumulating and being driven out when a fall occurs. In this very mine the men have since refused to use lamps, but means have been taken to avoid danger. In his report for 1866, Mr. Baker, alluding to similar accidents, said:—"Allowing men work in close proximity to 'goaves' (that is worked out spaces) containing accumulations of fire-damp, or permitting them to work in currents of air containing or likely to contain inflammable gas, with naked lights, is what no man in his senses, and who understands his business, would ever think of doing." He adds that this has occurred in the district he inspects, "through the ignorance and incompentency of some of the persons entrusted with the care and management of the underground operations, and to which the charter-master system, as a whole, has largely contributed."

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 16.—There is no alteration to notice with regard to the coal and iron trades of South Derbyshire. There is no improvement in the demand for merchant iron, whilst the furnaces are kept in blast, increasing the large quantity of pig held by makers generally. In the southern district the men, who have been out for some seven or eight months, are now fast giving way, having had enough of the Union, and seeing the folly of famishing for a principle in which there can be no advantage whatever to them. From facts gleaned on the spot, it is evident that the miners of Church Gresley are fast returning to their senses, and although they have succeeded in driving away the trade, still time will doubtless bring things back to their former state. One thing, however, is certain, that some hundreds of the men will have to seek work in other districts, and to leave the place to which they were attached by the strongest of ties, and where they had been happy and comfortable, until the arrival of agitators, who made them believe that they were suffering from grievances which they had never seen or heard of before. Those who will be left out will be, to use the pithy words of one of the principal managers, the idle, who would rather loiter about, living on the small allowance of the Union, and what they can get by begging and other means; the naturally discontented, who are satisfied neither with full work, full pay, nor with any other position; and the timid, who have not spirit enough to go to work for fear of incurring the displeasure of the delegates and unionists, and of being called "blacksheep," &c. During the past week a great many more of the men have gone to work, and so far as could be ascertained it would not take many more than 200 to completely fill up the pits throughout the district, so that there will be at least 400 whose services will not be required. It is evident that the tide will be reversed, and instead of Mr. Brown appealing to the miners to stick to him, they will have to see that he sticks to them. Last week the delegates and unionists made an effort for the purpose of enticing those men who had gone to work in the pits, for which purpose they got up a procession, which went through Gresley, Swadlincote, and Newhall. They intimated to some of the men that if they would come out they would be paid 14s. a week, but their efforts were far from successful. In some instances, as at Newhall, some of the workmen were stopped on the road as they were returning home, and after the usual salutations, threats were used towards them. The result has been that a secretary and a delegate have been summoned. At the rate the men have been returning to their work during the last few days, as well as for the number of strangers coming into the district, it is more than probable that by the end of next week all the pits will have their full complement of hands.

Most of the Sheffied trades continue in the same quiet state which has characterised them for a considerable time past, and so far the new year has not made any very perceptible difference to the Iron and Steel branches. As was anticipated, the ironworkers of the neighbourhood have given way, and accepted the 10 per cent. reduction, after a very poor show of opposition. At Milton and Elsecar the works, with the exception of the blast furnaces, are closed, although the men have not been indisposed to accept the reduction as an inevitable necessity. It is, however, expected that the works will be opened in a few days. As it is, the men are suffering very much, and if kept out much longer many of them will either be obliged to leave or seek for parochial aid. The action of the masters, however, plainly indicate the state of trade, and several of them appear to be of opinion that it would be to their advantage to close their establishments altogether for a time,

The Coal Trade in South Yorkshire is very far from active, considering the season is something exceptional. The business doing in "hards" is very limited, and at several of the collieries a good deal is being stacked. In house coal for London and the southern depôts there is not so much doing, so that even in Silkstones there has been a considerable falling off. Owing to the competition with the Derbyshire coalowners, the tonnage being forwarded to Grimsby is just now not so large as it has been, to some extent owing, it is said, to a reduction in the Derbyshire coal of 6d. per ton having been submitted to. To Lancashire there is no increase in the quantity being sent by the Manchester, Sheffield, and Lincolnshire Railway, which is now comparatively small; the local producers having reduced their prices are now having the call of the market. There is no alteration in the business doing in coke, makers producing sufficient to meet the requirements of consumers.

At the Silkstone Fall Colliery the miners have refused to submit to a reduction of 10 per cent., and have stated their willingness to work half-time in preference. At a meeting of the delegates of the men and the proprietors on Saturday, the former stated that they had orders from head quarters not to allow of their prices being lowered, unless such became general in the district. As a result the men began their week's work on Wednesday.

THE OAKS COLLIERY.—From various causes there has not been so much progress made during the week. On Monday, owing to the breaking of one of the valves, the fan was stopped, when a vast quantity of gas came up. There were several men down at the time, but they were got out without any of them being at all injured, although one of them, in advancing a day or two before to see how the roads were, was overcome, but was rescued by his companions. On Tuesday, owing to the atmosphere, the gas was so powerful that the men were unable to remain below. Since the last notice two horses and a donkey have been got out, but with no small difficulty. The horses had to be cut up, and the stench to those engaged in the operation was truly dreadful. Having now penetrated some yards beyond the stables in the south level, it is by no means improbable but what some bodies may be found, although the great bulk of them will be found at a considerable distance from the point at present reached.

TECHNICAL EDUCATION IN LANCASHIRE.—Mr. Buckmaster, of the Government Department of Science and Art, visited Wigan for the purpose of conferring with the subscribers to the Wigan Mining and Mechanical School on their resolution to close the school in consequence of the apathy of the classes for whose benefit the instruction there offered was mainly intended. After the interview a public meeting was held, under the presidency of the Mayor.—Mr. Buckmaster said he thought it rather strange that they should have to consider whether it was desirable to continue instruction in elementary science when public attention was being drawn to the subject, and in every direction there was a demand for the increase of schools, which had to some extent been a failure in Wigan. This certainly was not very creditable to Wigan, and he hoped when the plans for re-organisation were understood that the people would remove from themselves the reproach.—Several representatives of colliery proprietors stated that they could not be expected to subscribe if the colliers would not attend the classes.—As 16 persons in the room intimated their desire to join a mining class, it was resolved that one should be organised. The old mining school will, therefore, be re-established, and it will depend for its existence rather upon the payments of pupils and Government aid than the donations of subscribers.

REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 16.—The reports received from the various ironworks in the district are of such a character as prevents it being said any improvement has taken place during the past week, or that future prospects are brightening, and at the present time it may be confidently asserted that the Iron Trade of the district was never in a worse, if so bad, condition as it now is. Orders are given out very sparingly, and for no considerable quantities; consequently, they are speedily executed. Hopes, however, are entertained of an improvement taking place in the demand on home account as the year just entered upon advances. It is generally believed that railway securities have reached their lowest point, and for more than a week past shares have remained steady, and some of the leading companies' stocks have slightly advanced. Should this long-wished-for state of things continue, there is no doubt as securities are enhanced in value that proportionate purchases of iron will be made by the railway companies, as it is well known they have been prevented entering the market, owing to the want of confidence in their securities. A few of the home railway companies are purchasers, but their orders are rather limited. Prices are remarkably low, and this affords buyers an excellent opportunity, as there is no doubt when matters improve and business becomes more active prices will advance, and there will not be the opportunity of securing present facilities. For the miscellaneous qualities there is a moderate demand. A few shipments are being made to the United States, and the advices lately received show that some hundreds, probably thousands, of miles of railway require re-laying in that country. It is expected that large orders will be given out before long, and, as American buyers have a strong liking for South Wales rails, it is confidently believed that the exports will considerably increase before the spring quarter commences. There is no increase in the enquiries from the other foreign markets, and the exports generally are very limited. During the past month 11,808 tons of iron were exported to foreign parts, the greatest portion of which was cleared to the United States. The demand has slightly increased for pig-iron, and as the year proceeds there is no doubt this branch of the trade will somewhat improve. The Tin-Plate Trade is still in a depressed state, and will probably remain so until the orders from American houses become more numerous.

The Ynispenllwch Tin-Plate Company have just completed the erection of another new steam-engine, to drive a mill and cold rolls, and the same was successfully started on Saturday last, amidst the cheers of the workmen, who were afterwards invited by the company to a bounteous repast, in celebration of the event. This addition to the works will enable them to produce about 1800 boxes of tin-plates weekly. We believe this was the first tin-plate company to which the Joint Stock Act was applied, and, owing to the good sense of the few shareholders, the concern has been carried on like a private partnership, the entire management being placed in the able hands of one of their number, Mr. Richard Thomas, who has also the credit of originating this successful company.

For Steam Coal there is a tolerably good demand, but during the past week there has been a falling off in the exports, owing to the easterly winds which have prevailed, and prevented the arrival of vessels at the various ports. The want of tonnage has caused a slight stoppage of the regularity of employment which has lately prevailed at the collieries, but now the wind has shifted to a more favourable quarter, the vitality which formerly characterised the trade will be again evinced. Large quantities are required for the mail packet stations, and France still continues one of the best customers. For house qualities the demand has slightly improved, but this branch of the trade is far from satisfactory.

The Gilvach Colliery, which has been idle for the last twelve months, has been purchased by the Glamorgan Coal Company, and will shortly be put in full work.

Messrs. Evans and Sons, of the Ogmore Colliery, are sinking a pit to the No. 3 vein, and it is highly probable that in a very short time the output of coal in this sequestered valley will be considerably increased.

Arrangements are being made by the principal colliery proprietors of the district to hold a meeting, for the purpose of discussing the most equitable and effective mode in which a rate can be levied for the support of the sufferers from colliery accidents of all kinds, when they are wholly or partially disabled, and for the maintenance of their families when the cases terminate fatally. Mr. Vivian, M.P., Mr. Nixon, Messrs. Davis and Sons, proprietors of the Ferndale Colliery, and other leading colliery proprietors, have already expressed strong opinions in favour of Government adopting some scheme which would make due provision for the bereaved families, so as to avoid the onerous impost on the parishes to which the unfortunate people are chargeable, or continual appeals to the charity and sympathy of the public.

The arrivals at Swansea include—The Marquis of Worcester from Cuba, with 638 tons of copper ore for Richardson and Co.; Georgiana Grenfell from Cuba, with 630 tons of copper ore, also for Richardson and Co.; Henry Grenfell from Caldera, with 360 tons of copper regulus and 360 tons of silver ore for H. Bath and Son; Conception from St. Malo, with 130 tons of zinc ore for Dillwyn and Co.; Gaston from Antwerp, with 104 tons of fire-clay to order, and 60 tons of pig-iron for Forrester and Co.; Melanie and Heloise from Camillas, with 135 tons of zinc ore for the Swansea Zinc Co.; Symmetry from Carloforte, with 380 tons of zinc ore for H. Bath and Son; Esperance from Camillas, with 140 tons of zinc ore for the Swansea Zinc Co.; Julie Marie from Santander, with 180 tons of zinc ore to order; Quatre Freres and Maria from Bilboa, with 130 tons of zinc ore, &c., for H. Bath and Son; Lydie from Santander, with 167 tons of zinc ore for the Zinc Ore Co.; Emily from Huelva, with 220 tons of manganese ore to order; Ottawa from Hondeklip, with 300 tons of copper ore for Richardson and Co.; Cicero from Tal Tal, with 790 tons of copper regulus for Cobre Company (Limited).

FOREST OF DEAN, JAN. 14.—The severity of the winter season, just set in, has much increased the demand for Forest coals. The proprietors are, therefore, actively engaged in making preparations in order to meet the requirements of the market; but the general arrangements at all or most of the collieries are such as not to admit of much pressure from coal merchants. The Bowson Colliery, the property of the Great Western Deep Coal Company (Limited) is advertised to be sold on the 23d, at the Bull Hotel, Gloucester. Here is another case of bad management, as, after spending over 40,000*l.* with no advantageous results, we simply find two shafts, one to the depth of 168 yards, and the other about 284 yards. It was from the bottom of this latter, or the deepest shaft, that the water came in and prevented further sinking operations from being carried on. The company had made no provision for a pumping engine and pumps; the result was that, although not more than 300 gallons of water came in per minute, the plan which was adopted for drawing the water, by means of a winding-engine and large buckets, proved a complete failure. If efficient engineers and managers had been employed by or connected with this company, the coal would have been won long since, at a cost of one-third less than the sum they have expended. Wherever we turn our attention, and with whatever subjects our minds become engrossed, whether in the arts, sciences, or trades, progress and improvements are manifested and indelibly imprinted; but, among all these, can we in strict faith bring ourselves to believe that mining engineering has kept up in the race? We had hoped so, but there are indications to the contrary. Acting under the direction of the company, and adopting absurd plans, such as throwing two or three hundred bags filled with clay down the shaft in order to stop back the water, is quite sufficient to lead us to the conclusion that in, very many cases, the name of an engineer is possessed without the least practical knowledge. The few honest mining engineers of the Forest, although not in any way connected with this company, from the very first condemned the proceedings of this unfortunate firm, and predicted that they would make a complete failure. When that clever and worthy engineer, M. I. Brunel, excavated under the Thames for a tunnel the water from the river came in; he then, and very properly, too, had recourse to bags of sand, which were thrown into the river just where the water came into the underground excavation. The result was, as that gentleman anticipated, that, in consequence of the great pressure of the water in the river being above the point of escape, the bags of sand would be drawn downward, kept there, and eventually formed a base or foundation for a new cover of river deposit. On the contrary, at the Bowson Colliery there is a hundred yards of water up the pit, and the pressure of the water is upwards, or from the bottom of the shaft. At this point we think it very proper to remark that all the mining engineers and managers connected with this company are from the North. We read that formerly the wise men came from the East, and certainly in this instance they did not come from the North.

The strike at Messrs. Russell's forge is likely to terminate by the men resuming their work. Another of those railway accidents which occur so frequently on the Bullo Pill Branch came to pass on Tuesday. Immediately after the down train passed Cinderford the coupling chains broke, consequent on the frost being on the iron links. The train became divided into three parts, all of which continued in rapid motion, until coming to a steep incline, the speed rapidly increased, and the heavy trucks behind dashed into the front part of the train, completely smashing several trucks and damaging others. Fortunately, no person was in any way injured by the concussion. On Saturday, a verdict of "Accidental Death," was recorded relating to the death of Charles Virgo, aged 56 years, who was killed by falling down a quarry at Blakeney Hill. It is a great disgrace to the Forest authorities that these old quarries and pits—and there are many open—are not properly fenced, and we hope that such will be the case.

THE SILICATED CARBON FILTERING TAP.—This useful invention is intended for purifying water as it flows from an ordinary cistern or water-butt. The filtering tap is especially recommended to the proprietors of small tenements in poor localities, where, in many cases, several families derive their supply from the same receptacle, and where the water used for drinking and cooking is liable to every kind of contamination. The filtering medium is placed in the front part of the tap, which for convenience is made to unscrew. In order to clean the filtering tap (which may be done without running the water out of the butt), it is only necessary to unscrew the front part, and blow strongly through it. By this means all the impurities are brought to the surface of the filtering medium, and may be washed off before replacing the tap. It is impossible to over estimate the advantage, as far as the prevention of disease is concerned, of thus being able to obtain a supply of pure water in a district where the inhabitants are too poor to supply themselves with filters; and we would earnestly call the attention of the medical officers of such districts to a means of prevention at once simple and efficacious. Whilst on the subject of filters, we would also notice an improvement lately introduced by the Silicated Carbon Filter Company, in substituting india rubber instead of cork for the sockets into which the taps of their filters are fitted. This prevents the leakage of water from the softening or cracking of the corks, which has hitherto proved a considerable annoyance in using filters.—*British Medical Journal.*

Mr. F. B. Smart, the accountant, has been appointed official liquidator of the London Quays and Warehouses Company (Limited).

PRELIMINARY ANNOUNCEMENT.

LANCASHIRE STEEL COMPANY (LIMITED).

MR. WHEATLEY KIRK is honoured with instructions from the Official Liquidators of the Lancashire Steel Company (Limited) to SELL, BY AUCTION, during the present month, January, 1868, at the Clarence Hotel, in Manchester, the EXCEEDINGLY VALUABLE PROPERTY, constituting their PATENT FILE WORKS AT MANCHESTER, viz.:—Land, buildings, steam-engines, boilers, shafting and mill-gearing, steam, water, and gas pipes, plant, machinery, utensils, &c.

Full particulars in future papers, or, in the interim, of Messrs. SLATER and BARLING, solicitors, 4, Norfolk-street; or of F. H. JEWSBURY, Esq., and THOS. BROWNING, Esq., official liquidators, 108, King-street; or the auctioneer, 8, Essex-street, King-street, Manchester. 87

PRELIMINARY NOTICE.

TO MANUFACTURING ENGINEERS, IRON FOUNDERS, AND SHIP BUILDERS.

FOR SALE,—ENGINE WORKS, FOUNDRIES, IRON SHIPBUILDING YARD, &c., at HAYLE, in the WEST of CORNWALL.

In consequence of the DEATH, RETIREMENT, and ADVANCED AGE of some of the PARTNERS of the

CORNISH COPPER COMPANY,

Carrying on business at the port of HAYLE, in the county of CORNWALL, under the style of SANDYS, VIVIAN, and CO., the ENGINE WORKS, FOUNDRIES, BLAST and REVERBATORY FURNACES, HAMMER MILL, FITTING-UP SHOPS, BOILER YARD, SHIPBUILDING YARD for IRON or WOODEN VESSELS, PATTERN SHOPS, offices and other buildings connected therewith, will be OFFERED FOR SALE, at PUBLIC AUCTION, early in the spring, unless previously disposed of by private contract.

These works, where are manufactured the celebrated Cornish engines, are conveniently situated as respects water carriage, and have the advantage of the right of landing coal and other articles used in the works at nominal dues, and there are great facilities for exportation and craneage, either by the West Cornwall Railway or by shipping from the safe and accessible harbour of Hayle.

The PLANT and MACHINERY comprise all the requisite STEAM and WATER ENGINES, UTENSILS, PATTERNS, STEAM and TILT HAMMERS, ROLLS, FORGES, and other conveniences for carrying on a large trade. The steam and water-power together is of about 110-horse power, nominal.

The ENGINE WORKS and FOUNDRIES are extensive, and well provided with AIR and BLAST FURNACES, CRANES, and CYLINDER PITS, in which cylinders of 144 in. in diameter have been successfully cast, with adequate boring and all other requisite machinery.

The SHIPBUILDING YARD is spacious, and furnished with WORKSHOPS, MACHINERY, and conveniences. Slips of upwards of 300 tons measurement have been launched, and there are capacities for launching up to 500 tons.

The whole works cover about 7 acres, and contain ample space for storing coal, iron, and everything used in the trade.

The cost of materials and labour at Hayle is very moderate.

Besides the ordinary business of ironfounders and shipbuilders, the proprietors have carried on for upwards of half a century a large trade in the manufacture of engines for the mines in the mining districts of the West of Cornwall, with reference to which the works are most conveniently situated, and they enjoy the advantage of an influential home, colonial, and foreign connection, which it is considered may be still further extended.

The superiority of Cornish pumping-engines, whether for waterworks, draining, or mining purposes, is well known, and the reputation of Messrs. SANDYS, VIVIAN, and CO. for the excellence of the machinery and tools of all kinds manufactured by them for mines at home and abroad is generally known.

The works are at present in full operation, and all the machinery in first-rate order.

The purchaser will have the option of carrying on any work under hand, whether on contract or otherwise.

The tenure of the premises is for the most part freehold, and what is held on lease is at a moderate rent. The firm are the owners for a like tenure of some hundreds of houses adjoining the works, several of which it might be desirable for a purchaser to secure. Among them will be found houses adapted for a manager of the works, foreman of the shops, &c.

For further information and particulars, application may be made, either personally or by letter, to—

MESSRS. SANDYS, VIVIAN, AND CO., HAYLE, CORNWALL.

Dated 15th January, 1868. 98

TO MINE ADVENTURERS AND AGENTS.

FOR SALE,—

THE UNDERMENTIONED

ENGINES AND MATERIALS,

At the following very LOW PRICES:—

ONE highly-polished 40 inch cylinder PUMPING ENGINE, 9 feet stroke, with 11 ton boiler, in first-rate condition	£	300	0 0
ONE very bright 50 inch cylinder PUMPING ENGINE, 10 feet stroke, with 19 tons of boilers, first piece of main rod and caps, in excellent condition		375	0 0
ONE 40 inch cylinder STAMPING ENGINE, very bright, and in splendid condition, with two first-rate boilers, weighing (with the mountings) about 25 tons, new connection rod, two new fly wheels, saddles, and shafts (about 23 tons in weight), and the whole of the castings and brasses necessary to complete a steam stamps of 96 heads, entirely new, never having been erected. [The last-named is an exceedingly cheap lot, being all new, excepting the indoors portion of the engine, which is equal to it.]		1000	0 0
ONE 30 inch cylinder PUMPING ENGINE, with 8 ton boiler		225	0 0
ONE 8-horse power PORTABLE STEAM ENGINE, for agricultural purposes		45	0 0
ONE 8-ton BOILER		50	0 0
Sixteen heads of STAMPS complete, in wood, iron, and brass, four cams to the round, very good		30	0 0
TWO 16-head STAMP AXLES, new, four cams to the round, never worked		34	0 0
Several 24-head STAMP AXLES, with the necessary saddles, brasses, braces, cams, tongues, grate plates, stamp heads, entirely new, never worked, at per set of 24 heads		92	0 0
TWENTY 10 inch PUMPS, new, at per cwt.		0	5 0

A large quantity of secondhand PITWORK of all kinds, BALANCE BOBS, SHAFT BOBS, ROD PLATES and BOLTS, FLAT ROPES and PULLIES, and various other materials at equally low prices.

Apply to— WILLIAM DERRY,

HIGHER FOUNDRY, ST. AUSTELL, CORNWALL. 87

FOR SALE, BY PRIVATE CONTRACT,

SPARE MACHINERY, &c., viz.:—

ONE 80 in. cylinder PUMPING ENGINE, with THREE BOILERS and balance-bob, &c., complete.

ONE 72 in. cylinder PUMPING ENGINE (Bull), with TWO BOILERS, &c.

ONE 24 in. cylinder WINDING ENGINE, BOILER, cage, &c.

ONE 26 in. cylinder WINDING ENGINE, TWO BOILERS and steam capstan attached.

ONE 36 in. cylinder STAMPING ENGINE, BOILER, &c., with cast-iron axle for 60 heads, nearly new; 14 ft. calciner, complete.

Between 300 and 400 first-rate PUMPS from 6 to 20 inch, with windbores, matchings, H pieces, &c., &c.; 14 plunger poles from 7 to 20 in., with stuffing boxes and glands to fit.

A quantity of hammered iron rod plates, rod pins, staples and glands, &c; a quantity of pitch pine and other main rods from 10 to 15 in.; 2 capstans and 3 shears; capstan rope, chains, and a variety of other articles.

For viewing the same, apply to the Agents.

Further particulars may be had of Mr. WM. POLKINGHORNE, the purser, at the mine; or of WM. WEST, Esq., C.E., Tredenham House, St. Blazey.

Dated Par Consols Mine, Par Station, Cornwall, 21st November, 1867. 90

FOR SALE, a PORTABLE STEAM ENGINE of 25 horse power. Winding gear to order to suit circumstances. SECOND-HAND PORTABLE STEAM ENGINES, with new MORTAR MILLS, SAW TABLES, &c., on advantageous terms.

Apply to Messrs. BARROWS and CARMICHAEL, Engineers, Banbury, Oxon. 97

COAL CUTTING MACHINERY.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.

The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.

All communications to be made to Messrs. FIRTH, DONISTHORPE, and BOWER, No. 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE.

BRITISH, COLONIAL, AND FOREIGN PATENTS, REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.

MR. MICHAEL HENRY,

Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Present Patent Law,"

PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.

Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised. Searches conducted. Abstracts, Cases, and Opinions drawn.

Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.

Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars street. 96

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the BOSWORTHEN AND PENZANCE CONSOLS UNITED MINING COMPANY (LIMITED).—The Registrar of this Court has appointed MONDAY, the 27th day of January instant, at the Registrar's Office, at Truro, to SETTLE the LIST of CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WILLIAM MICHELL, Registrar of the said Court.

Dated this 14th day of January, 1868. 96

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the HALLENBEAGLE MINING COMPANY.—ALL CREDITORS, or CLAIMANTS of the above-named company, who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby required to COME IN AND PROVE THEIR SEVERAL DEBTS OR CLAIMS, at the Registrar's Office, Truro, on Tuesday, the 28th day of January inst., at Eleven o'clock in the forenoon, or, in default thereof, they will be EXCLUDED from the BENEFIT OF ANY DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL,

Registrar of the above-named Court, Truro, Cornwall.

Dated Truro, the 14th day of January, 1868. 95

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862, and of the TRELOWETH MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the above company who have not received notice from the Registrar of the said Court that their claims have been already admitted are hereby required to COME IN AND PROVE THEIR SEVERAL DEBTS OR CLAIMS at the Registrar's Office, Truro, on Friday, the 24th day of January instant, at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT OF ANY DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court, at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL, Registrar of the above-named Court, Truro, Cornwall.

Dated Registrar's Office, Truro, January 15th, 1868. 94

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the TOLVADDEN MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 20th day of December last, presented to the Vice-Warden of the Stannaries by Sandys, Vivian, and Co., creditors and also shareholders of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, Truro, in the county of Cornwall, on Wednesday, the 19th day of February next, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 12th day of February next, and notice thereof must at the same time be given to the petitioners, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Solicitors for the Petitioners);

GREGORY, ROWCLIFFE, AND RAWLE, No. 1. Bedford-row, London,
(Agents of the said Solicitors).

Dated Truro, January 16, 1868. 97

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WENDRON CONSOLS MINING COMPANY.—TENDERS will be RECEIVED at the Registrar's Office, Truro, until WEDNESDAY, the 29th day of January instant, stating the highest price which will be given for the following STEAM ENGINES, now at WENDRON CONSOLS, in the parish of Wendron, within the said Stannaries, viz.:—ONE 70 inch cylinder PUMPING ENGINE, complete; 1 50 in, ditto; and 1 18 in. whim ditto, with fly-wheel, complete.

For inspection, apply to Mr. BENNETT JOHNS, Wendron Church Town.

HODGE, HOCKIN, AND MARRACK, solicitors, Truro.

Dated Registrar's Office, Truro, January 16, 1868. 98

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the GARLIDNA UNITED MINING COMPANY.—TENDERS will be RECEIVED at the Registrar's Office, Truro, until WEDNESDAY, the 29th day of January instant, stating the highest price which will be given for the 24 in. cylinder stamping and drawing STEAM ENGINE, with fly-wheel and cage, complete; and also for a quantity of brass, weighing about ½ ton.

For inspection, apply to Mr. SAMUEL VERCOE, the person in charge thereof.

HODGE, HOCKIN, AND MARRACK, solicitors, Truro.

Dated Registrar's Office, Truro, January 16, 1868. 99

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the TRESKERBY MINING COMPANY.—TENDERS will be RECEIVED at the Registrar's Office, Truro, until WEDNESDAY, the 29th day of January instant, stating the highest price which will be given for the WHOLE or ANY PART of the MACHINERY, MATERIALS, and OTHER EFFECTS, at TRESKERBY MINE, in the parish of Gwennap, viz.:—ONE 36 in. cylinder PUMPING ENGINE, with 11 ton BOILER; shears, with pulleys; 2 iron buckets, mandril, screw stock, &c.; and a variety of other articles and effects in general use in mines.

The above may be inspected on application to Mr. JOSEPH STEVENS, of Vogue, St. Day, in charge thereof.

HODGE, HOCKIN, AND MARRACK, solicitors, Truro.

Dated Registrar's Office, Truro, January 15, 1868. 100

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH DOLCOATH MINING COMPANY.—The Registrar of this Court has appointed FRIDAY, the 31st day of January instant, at the Registrar's Office, at Truro, to SETTLE the LIST OF CONTRIBUTORIES of the ABOVE-NAMED COMPANY, now made out and deposited at the said office.

WILLIAM MICHELL, Registrar of the said Court.

Dated this 16th day of January, 1868. 101

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the BOSWORTHEN AND PENZANCE CONSOLS UNITED MINING COMPANY (LIMITED).—TENDERS will be RECEIVED by the Registrar of the Vice-Warden's Court, at Truro, until MONDAY, the 27th day of January inst., stating the highest price which will be given for the MINE SETTS or GRANTS, and the whole or any part of the

MACHINERY, MATERIALS, and OTHER EFFECTS

At BOSWORTHEN AND PENZANCE CONSOLS UNITED MINES, in the parish of Sancreed, viz.:—

ONE 33 inch PUMPING and STAMPING ENGINE, with BOILER, about 7 tons.

Fly wheel and stamps axle, with 16 heads of stamps; 40 fms. 8 in. pumps; 16 in. plunger pole; stuffing box and gland; 1 plunger working; H and top door piece; 30 fms. 8 in. wood main rods, with strapping plates, bolts, and bars complete; 2 2½ ft. shieves; 20 fms. wood stave ladders; 1 8 arm capstan chain; 1 shears, with pulleys complete; and 1 iron balance bob.

JONES'S FLAT ROD SHAFT.—30 fms. 6 in. bucket lift, complete; 10 fms. 1½ in. bucket rods; 20 fms. 7 in. wood main rods; 30 fms. iron stave ladders; 1 horse whim; 70 fms. ⅜ in. horse whim chain; 1 shears and pulleys, complete; 1 iron balance bob; 220 fms. 1¾ in. iron rods, travellers, brackets, and stands.

HARVEY'S SHAFT.—One horse whim and shaft tackle, with pulleys and kibble, complete; 50 fms. ⅜ in. horse whim chain; 1 cwt. white grease; 1¼ cwt. anti-friction; 1½ cwt. powder; fuse, oil; several fathoms of old rope; blocks, lifting screw, &c.; 33 in. smith's bellows; smiths' and miners' tools; new and old iron; screw stock, complete; new and old steel; beam, stand, and weights.

CARPENTER'S SHOP.—Bench, saw pit frame, wheelbarrows, grindstone, 45 ft. wood stave ladder, and 2 round buddles.

Account house and office furniture, and a variety of other articles and effects in general use in mines.

The above may be inspected on application to S. OSBORNE, in charge thereof.

HODGE, HOCKIN, AND MARRACK, Truro
(Agents for E. S. Boyns, Solicitor, Penzance).

Dated Registrar's Office, January 16, 1868. 102

SOUTH EXMOUTH MINE, HENNOCK, NEAR EXETER.

MR. SAMUEL DAY WILL SELL, BY AUCTION, at the above mine, on Tuesday, 21st January instant, at Eleven o'clock, precisely, the undermentioned

MINING MATERIALS, IRON, TIMBER, &c., comprising—

ONE WATER WHEEL, 20 ft. high, by 18 in. breast, with stand, bearings, and segments.

ONE WATER WHEEL, 8 ft. high, by 11 in. breast, with wood stand.

Tram irons and wagons, kibbles, chains, strapping plates, iron shafting, screwing tools, patent weighing machine, weights, spring balance, and many other useful materials.

The mine is situate about four miles from the Bovey Station, on the Moretonhampstead Railway; and about ten miles from Exeter.

Catalogues may be obtained of the auctioneer, Culver House, near Exeter; of Capt. J. P. NICHOLLS, Christow, near Exeter; and of Mr. J. O. HARRIS, public accountant, 2, Gandy-street, Exeter. 103

COPPER MINE LEASE, AND VALUABLE MACHINERY, PLANT, AND MATERIALS, on the DEVON WHEAL LOPES MINE, situate about a mile from the Bickleigh Station on the Plymouth and Tavistock Railway, FOR SALE.

MR. JOHN VOSPER WILL SELL, BY AUCTION, on the Mine, on Wednesday, the 22d day of January, 1868, by order of Frederick Rooke, Esq., the Liquidator of the Devon Wheal Lopes Mining Company (Limited), unless previously disposed of by private contract, of which due notice will be given, subject to such conditions of sale as shall be then and there produced, in one lot, all that very extensive MINE SETT, or LEASE, of the

DEVON WHEAL LOPES COPPER MINE,

Situate in the parish of BICKLEIGN, in the county of DEVON, on the Plymouth and Tavistock Railway, granted by Sir Massey Lopes, Baronet, for the term of 21 years, from the 25th of March, 1865, at 1-15th royalty. Together with a grant of water from the River Plym by the said Sir Massey Lopes, Bart., for the like term of 21 years from the 5th May, 1865, at the yearly rent of £50 during the first two years, and of £75 during the residue of the said term.

Together also with the PLANT, MACHINERY, and MATERIALS on the said Mine, consisting of a WATER-WHEEL, 40 ft. diameter, 8 ft. breast, with cast-iron cylindrical axle, segments, and centre pieces, drawing machine attached. Machine-house; 35 fms. of 3 in. iron rods, 5 shaft travelling and balance bobs, 140 fms. 2¾ in. wire rope, with pullies and stands, 8-arm capstan, 133 fms. of 14 in. capstan rope, 60 ft. shears and posts, 2 poppet heads, 30 fms. of 20 in. pitwork, 20 fms. 14 in. plunger lift, 23 fms. 11 in. drawing lift, 80 fms. of tram-road iron 2½ and ⅝, 50 fms. 12 in. main rod, 40 fms. of whim rope, shaft ladders, and a great quantity of other materials in general use in mines, full particulars of which appear in handbills.

This extensive sett consists of several shafts. The Main Engine-shaft is 62 fms. deep, in which there are five levels, each of considerable extent, and the lodes are fine looking. The 14 fm. level is driven 100 fms. east and 170 fms. west of the engine-shaft. The 22 fm. level is driven 55 fms. west of the engine-shaft. The 30 fm. level is driven 95 fms. east of the footway shaft. The 50 fm. level is driven 170 fms. east of the engine-shaft; and the 62 fm. level is driven 145 fms. east and 28 fms. west of the engine-shaft. The deep adit level is driven west nearly 150 fms. The end is improving; good stones of copper ore have lately been discovered. In the Trial shaft is a fine gossan lode, from 3 to 4 ft. wide. Ores, composed of blende, copper, and mundic, can be immediately raised in the stopes in the 30 fm. level. A considerable sum of money has been expended on the workings.

A plan of the sett is endorsed on the lease, which will be produced at the time and place of sale, and may be inspected at any time prior to the sale at the office of the solicitor hereinafter named.

The plant and machinery have been placed on the Mine within the last three years, at great expense, and will be found worthy the attention of purchasers.

To view the Mine, apply to Capt. JOSEPH RICHARDS, Lamerton, of whom all necessary information may be obtained; and for further particulars to FREDERICK ROOKE, Esq., the Liquidator, No. 53, Southville-crescent, Bedminster, Bristol; to the Auctioneer, Tavistock; or to

Mr. CHARLES TADDY,
Solicitor, Shannon-court Chambers, Bristol.

There will be luncheon at Eleven o'clock, and the sale will commence punctually at half-past Twelve. 104

GLAMORGANSHIRE.

VALUABLE COLLIERIES FOR SALE, NEAR NEATH.

MR. W. C. MORRIS has received instructions to SELL, BY AUCTION, at the Castle Hotel, Neath, on Wednesday, January 22, 1868, at Four o'clock in the afternoon (subject to conditions of sale to be then produced), all those COLLIERIES, with the VEINS, MINES, and SEAMS of COAL, and other MINERALS held with the same, commonly called and known by the name of—

BRITHDIR, CWMDU, AND COURT HERBERT COLLIERIES,

Situate in the parishes of CADOXTON-JUXTA-NEATH and LLANSAMLET, county of GLAMORGAN, containing in the whole about FIVE THOUSAND FOUR HUNDRED ACRES, together with all the ENGINES, PLANT, and MACHINERY belonging thereto.

Full particulars of the leases, and terms under which the leasehold portions are held, and the conditions upon which the property will be sold, are in preparation, and will be ready for delivery in a few days, and can be obtained upon application to JAMES KEMPTHORNE, Esq., Solicitor, Neath; or to the Auctioneer, Church-place, Neath.

The collieries may be viewed upon application to J. N. MOORE, Esq., Lonlas, near the premises. 105

SALE ON FRIDAY, the 24th day of JANUARY, 1868.

TO COLLIERY PROPRIETORS, CHARTER MASTERS, AND OTHERS.

MESSRS. POWELL AND SON WILL SELL, BY AUCTION (in consequence of the expiration of the lease), at the TIPTON GREEN COLLIERY, TIPTON, all the COLLIERY IMPLEMENTS, rails, sleepers, turnouts, plates, flat chains and ropes, pit frames, rollers and posts, wharf planks, TWO PUMPING LIFTS, also the undermentioned

STEAM WINDING AND PUMPING ENGINES:—

No. 5.—ONE 35-horse power BEAM ENGINE, with TWO BOILERS, winding gear and break.

No. 6.—ONE nearly new 40-horse HORIZONTAL ENGINE, with TWO BOILERS, winding gear and break, by J. and G. Davies.

No. 10.—ONE 15-horse BEAM ENGINE, with winding gear and break.

No. 9.—ONE 20-horse BEAM ENGINE, with TWO BOILERS, winding gear and break.

No. 8.—ONE 30-horse CONDENSING ENGINE, with large BOILER, winding gear and break.

No. 11.—ONE 35-horse BEAM ENGINE, with TWO BOILERS, winding gear and break.

No. 16.—ONE 25-horse BEAM ENGINE, with TWO BOILERS, winding gear and break.

ONE 12-horse HORIZONTAL PUMPING ENGINE.

EIGHT ENGINE-HOUSES, and the hovels on wharves and pit banks, an other useful effects.

Catalogues will be ready six days prior to the sale, and may be had at the offices of Messrs. HARWARD, SHEPHERD, and HARWARD, Solicitors, Stourbridge; Mr. ELIHU SMALLMAN, Kingshill, Wednesbury; Mr. ROBERT LEACH, on the premises; or at the Auctioneers, High-street, Tipton.

Sale to commence at half-past Ten A.M. 106

FOREST OF DEAN, GLOUCESTERSHIRE.

MESSRS. BRUTON AND KNOWLES have received instructions TO SELL, BY AUCTION, at the Bell Hotel, Gloucester, on Thursday, the 23d January, 1868, at Two for Three o'clock in the afternoon, in One Lot, a very VALUABLE and EXTENSIVE COLLIERY, known as the

BOWSON COLLIERY,

The property of, and hitherto worked by, the Great Western Deep Coal Company (Limited).

It comprises the COLEFORD HIGH DELF VEIN, well known in the neighbourhood for its VALUABLE PROPERTIES, extending over an area of about 300 acres, and consisting of the whole of the NEW BOWSON GALE (royalty, 5d. per ton) and EAST DEAN DEEP GALE (royalty, 4d. per ton).

One shaft, 11 ft. diameter, has been sunk 284 yards, and one shaft, 12 ft. diameter, has been sunk 168 yards.

The surface plant consists of one powerful high-pressure ENGINE, with a pair of 26 in. cylinders, 4 ft. stroke, rope roll, 15 ft. diameter; two BOILERS, 30 ft. long, 6 ft. 6 in. diameter; donkey engine, for supplying the boilers; substantial pulley frame, with pulleys, 12 ft. diameter; 2 large water cages, with malleable iron conductors down the shaft for the same; a winding engine, with one 18 in. cylinder, 3 ft. stroke, one 14 in. cylinder, with 2 ft. 6 in. stroke, with strong rope roll, 8 ft. diameter, and boiler for the same, 30 ft. long, 5 ft. 6 in. diameter; pulley frames; pulley, 10 ft. diameter; sawmill engine, cylinder 12 in. diameter, length of stroke, 2 ft., with cast-iron circular saw frame; 1 powerful main crab (or capstan); together with substantially brick built engine-house, boiler seats, chimneys, carpenters' shop and sawmill, engine house, with corn loft above, office, store houses, smiths' shop, stables, powder house, and other requisite buildings.

The property is situated near Cinderford, and about 60 yards from the branch line of the South Wales Broad-Gauge Railway.

For further particulars apply to Mr. H. ROWBOTHAM, Great Western Deep Coal Company (Limited), Pontefract; Mr. THOS. BURDESS (manager of the company), at the works, who will show the property; or to the auctioneers, King-street, Gloucester. 107

PENHALLOW MOOR MINE.

MR. W. J. CLYMA will SELL, BY AUCTION, in One Lot, at the Royal Hotel, Truro, at Three P.M., on Wednesday, the 29th inst., the WHOLE of this MINE, and all the MATERIALS as they now stand, including an excellent (nearly new) 60 in. CYLINDER ENGINE and BOILER, and the pitwork of two shafts, complete.

This mine is situated in the parish of Newlyn, and lies between the boundaries of Cargoll and the late celebrated East Wheal Rose Mines.

Orders for inspection may be obtained on application to Capt. J. B. CHAMPION, on the mine; or to Mr. EDWARD MICHELL, the purser, Truro.

Dated Truro, January 8, 1868. 108

TO BE LET, the COAL and other MINERALS under about SEVENTY-NINE STATUTE ACRES of LAND, three miles from MOLD, NORTH WALES. The various seams of coal, cannel, &c., of the Mold district are now being worked at adjoining collieries. A branch of the London and North-Western Railway runs through the property.

A plan of the property, and a section of the strata, can be seen at the office of Mr. T. L. COTTINGHAM, M.E., Wrexham-street, Mold, from whom all information can be obtained. 109

NICHOLLS, MATHEWS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.
MESSRS. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices. 110

JOHN HOCKING AND SON, ENGINEERS, REDRUTH,
CALL the ATTENTION of COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of secondhand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, removal, &c., of every description of mining machinery undertaken.
FOR SALE, ONE 22 in. HORIZONTAL, and ONE 24 in. VERTICAL ROTATORY ENGINE. 111

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C. 46

RAILWAY CARRIAGE COMPANY (LIMITED)
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER. 116

THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture; particulars on application.
London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W. 114

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED),
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION of RAILWAY ROLLING STOCK.
OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM. 115
LONDON OFFICE,—118, CANNON STREET, E.C.

GALLOWAY BOILER TUBES.
NO CORNISH or LANCASHIRE BOILERS should now be MADE without having the FLUES STRENGTHENED by means of these TUBES. They effect a considerable saving in fuel, increase the quantity of steam, and also improve the circulation, thus preventing priming, &c. 116
W. AND J. GALLOWAY AND SONS, ENGINEERS, MANCHESTER.

GALLOWAY BOILER TUBES
ARE ESPECIALLY ADAPTED for INTRODUCTION into EXISTING BOILERS. Upwards of 40,000 of these TUBES are now working. Full particulars of names of firms who have them at work may be had from the Patentees—
W. AND J. GALLOWAY AND SONS, ENGINEERS, MANCHESTER. 117

DYNAMITE, OR NOBEL'S PATENT SAFETY BLASTING POWDER,
May now be had from
MESSRS. WEBB AND CO., CARNARVON,
Sole consignees from the patentee.
This powerful BLASTING AGENT will not explode from a spark, or concussion alone, but requires the combined effect of both, and is fired by a strong percussion cap and ordinary fuse. In a compressed state it may be fired in damp holes, or under water.
Force, SEVEN TIMES that of the BEST GUNPOWDER.
It will shiver to pieces cast or wrought-iron, or the toughest teak timber. No tamping is required. It is by far the safest explosive for blasting purposes ever discovered. 16

NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.
THE EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.
It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.
Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.
One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and displaces it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.
This invaluable quarrying agent may now be obtained from Messrs. WEBB and Co., Carnarvon, sole consignees from the patentee.

PEAT, PEAT FUEL, AND PEAT CHARCOAL,
HOW TO MANUFACTURE ECONOMICALLY,
By WILLIAM ELSAM
(Late Manager of the Blaen Pellenna Peat Charcoal Works).
Gratis on application to—
ELSAM and Co., 38, Upper Thames-street, London; 44, High-street, Bristol.
WILLIAM ELSAM, Palmerston Villa, Knowle, Bristol.
Or forwarded on receipt of stamp and address. 120

Now ready, price One Shilling,
PULBROOK'S COMPANIES ACT, 1867,
WITH SEVERAL HUNDRED NOTES.
EFFINGHAM WILSON, Royal Exchange. 121

Just published, price 2s. 6d.,
JOINT-STOCK COMPANIES:
HOW TO FORM THEM.
BEING A PRACTICAL GUIDE FOR PROJECTORS, PROMOTERS, DIRECTORS, SHAREHOLDERS, CREDITORS, SOLICITORS, SECRETARIES, AND OTHER OFFICERS.
By THOMAS TAPPING, Esq., of the Middle Temple, Barrister-at-law.
This book contains a popular exposition of the law relating to public companies as it at present stands, and is written in a style readily intelligible to non-professional readers. Legal technicalities have been, as far as practicable, avoided, and the information given has been so arranged as to present itself in the order in which it will be required by those concerned.
London: MINING JOURNAL Office, 26, Fleet-street. 122

Now in the Press, price 5s
STATISTICS OF THE MINES OF CORNWALL AND DEVON, WITH OBSERVATIONS UPON THEM.
By THOMAS SPARGO, STOCK and SHAREDEALER, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.
I beg to inform the mining interest that my work, under the above title, will be issued at the end of this month. It will contain the following particulars—viz., the geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last two years, and of total dividends paid to the present time. The work will be illustated by a map of Cornwall and Devonshire; geological district maps, divided into eight sections, in which will be shown the boundary lines of each parish, height of hills, sources of rivers, &c.; maps of St. Just, St. Ives, Marazion, Helston, Gwinear, Chiverton, Bodmin, Liskeard, Devon Great Consols, Ashburton, and Exmouth mining districts, showing boundary lines of each property, with the lodes, &c., traversing them.
It will also contain transverse and longitudinal sections of Dolcoath Mine (kindly supplied by Captain Charles Thomas); section of workings in Botallack Mine (supplied by the manager, S. H. James, Esq.); longitudinal sections of workings upon the main lode in Great Wheal Vor and Tresavean Mines; geological map of the Fowey district (supplied by Major Davis, R.M.); historical account of the Devon Great Consols, and of all the principal mines in the two counties. 123

THE GOLD MINES OF NOVA SCOTIA.
UNDER OFFICIAL PATRONAGE.
Now in the press, and will be issued early in December,
A POPULAR GUIDE, OR HANDBOOK, FOR TOURISTS, MINERS, AND INVESTORS, INTERESTED IN THE GOLD MINES OF NOVA SCOTIA. By A. HEATHERINGTON,
Author of "Cosmopolite's Statistical Reviews," &c., &c.
Copies can be had at the MINING JOURNAL Office, 26, Fleet-street, London. 124

Sonora Silver Mining Company
(LIMITED).
Registered under the Companies Acts, 1862 and 1867.

CAPITAL £100,000, IN 40,000 SHARES OF £2 10s. EACH
(WITH POWER TO INCREASE).

Deposit 10s. per share on application, and 10s. on allotment.
Calls 10s. per share, at intervals of not less than three months each, from the registration of the company, with the option for any shareholder to pay up in full, receiving 5 per cent. interest on excess over calls, thereby becoming entitled to share warrants to bearer under the Companies Act, 1867.
The deposit of 10s. per share to be returned in full in the event of no allotment.

DIRECTORS.
GEORGE C. HOCKIN, Esq., Director of the Anglo-Mexican Mint Company.
R. WALLEN JONES, Esq., Director of the Rossa Grande Gold Mining Company (Limited)
Captain M. F. MAURY, LL.D., F.R.G.S., &c., Belsize Park.
CHARLES MORRIS, Esq., Chairman of the United Mexican Mining Company (Limited).
WALTER SHAIRP, Esq., Director of the Royal Copper Mines of Cobre (Limited).

SOLICITOR—J. ARTHUR MORGAN, Esq., 1, Winchester-buildings, E.C.
BANKERS—The London Bank of Mexico and South America (Limited).
" The London and County Bank and its branches.
BROKERS—Messrs. GEORGE HARRIS and SONS, 27, Change-alley, London.
" EDWARD FOX, Esq., 51, Dame-street, Dublin.
CONSULTING ENGINEER—JOHN PETHERICK, Esq., F.G.S. and M.E.
SECRETARY (PRO TEM.)—A. W. WETHERELL, Esq.

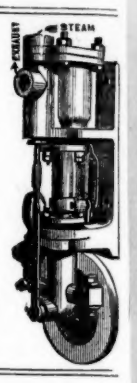
TEMPORARY OFFICES.
No. 1, WINCHESTER BUILDINGS, GREAT WINCHESTER STREET, LONDON.

ABRIDGED PROSPECTUS.
This company is formed for the purpose of purchasing two valuable estates, called "The Huruapa" and "The Almada" estates, and situate in Sonora and Chihuahua, Mexico, and which have been provisionally purchased, under the advice of Messrs. John Petherick and J. P. Clemes, the well-known mining engineers, after a thorough personal survey. It is estimated by the above engineers that these properties will produce, when efficiently developed, £40,000 nett profit per annum.
Full prospectuses and forms of application for shares, and copies of the reports, plans, &c., of the engineers, may be obtained from the brokers or secretary, at the temporary offices of the company, where may also be seen samples of the silver ores assayed by Messrs. Johnson and Matthey, and a copy of the Memorandum and Articles of Association.

BARROW LIFT.
HOISTING, OR DECK
ENGINES.

PARIS EXHIBITION, 1867—AWARDS, } Silver Medal for STEAM CRANES. Bronze Medal for DONKEY FEED PUMPS.

APPLEBY BROTHERS,
EMERSON STREET, SOUTHWARK,
LONDON, S.E.,
Engineers and Patentees of STEAM CRANES, DONKEY PUMPS, &c.



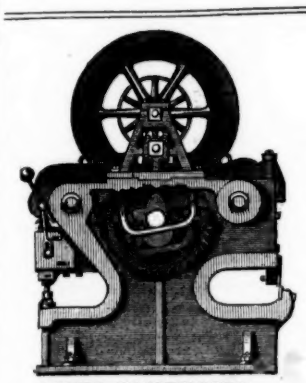
PATENT DONKEY PUMPS.

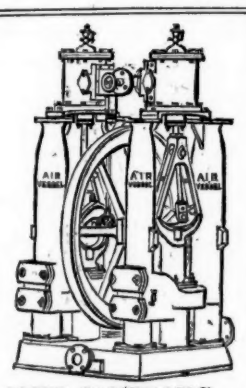
Ram	1½ in.	2 in.	2¼ in.	2½ in.	2¾ in.	3 in.	3¼ in.	3½ in.	4 in.
*Gall. per hour..	230	400	680	850	1200	1500	2100	2500	3800
Approx. H.P.	15	25	40	50	80	95	130	150	230
Price	£10 5	£12 10	£15	£18	£21	£24	£ 28	£30	£35

* Calculated at 200 strokes per minute.

ISAAC STOREY AND SON,
MAKERS OF
DOMES AND OTHER FITTINGS FOR LOCOMOTIVE ENGINES,
STILLS, PANS, AND GENERAL COPPER WORK,
IMPROVED WATER GAUGES, BLOW-OFF COCKS, SAFETY VALVES, FUSIBLE PLUGS, &c.,
As recommended by the Steam-Boiler Associations.
GENERAL STEAM WORK, WHEEL VALVES, SLUICE VALVES, COCKS, &c.
IMPROVED GAS VALVES.
BABBITT'S AND FENTON'S PATENT ANTI-FRICTION METALS.
Wholesale Agents for Bourdon's, Schæffer's, and other good Makers of
STEAM AND VACUUM GAUGES;
Richard's, M'Naught's, and Hopkinson's
STEAM ENGINE INDICATORS.
Wrought Iron Tubes and Fittings for Steam and Gas Work.

KNOTT MILL BRASS AND COPPER WORKS,
LITTLE PETER STREET,
AND AT
24, DEANSGATE,
NEAR THE EXCHANGE.
MANCHESTER.
Illustrated Lists on Application.


JOHN CAMERON'S
PATENT DOUBLE CAM LEVER PUNCHING and SHEARING MACHINE,
1¼ × 1¼ in. × 24 in.=8 tons, £185.
WORKS,
EGERTON STREET, HULME, MANCHESTER.

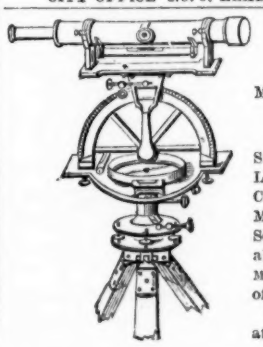


JOHN CAMERON'S
STEAM PUMPS,
From 2 to 12 in. diameter,
SINGLE AND DOUBLE-ACTING.
WORKS,
EGERTON STREET, HULME, MANCHESTER.

SIX POUNDS PER WEEK
While laid up by injury, and
ONE THOUSAND POUNDS IN CASE OF DEATH CAUSED BY ACCIDENT OF ANY KIND,
May be secured by an annual payment of from £3 to £6 5s.
TO THE
RAILWAY PASSENGERS' ASSURANCE COMPANY.
RAILWAY ACCIDENTS ALONE
May also be provided against by insurance tickets for single or double journies.
For particulars apply to the Clerks at the Railway Stations, to the Local Agents, or at the
OFFICES,—64, CORNHILL, and 10, REGENT STREET, LONDON.
W. J. VIAN, Sec. 126

STEAM-BOILERS made by WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application.

JOHN AND EDWIN WRIGHT,
PATENTEES.
(ESTABLISHED 1770.)
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED
PATENT FLAT AND ROUND WIRE ROPES,
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.
UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM
CITY OFFICE No. 5, LEADENHALL STREET, LONDON, E.C.


A. JEFFERY
(Eight years with the late Mr. WILTON, St. Day),
MATHEMATICAL INSTRUMENT MAKER,
CAMBORNE, CORNWALL,
Supplies MINERS' DIALS, CIRCUMFERENTERS, LEVELS, CIRCULAR and PLAIN PROTRACTORS, CASES OF DRAWING INSTRUMENTS, SCALES, MEASURING CHAINS AND TAPES, ASSAYERS' SCALES and WEIGHTS, ENGINE COUNTERS, and all kinds of SURVEYING and MAPPING INSTRUMENTS of the most improved constructions, and of guaranteed accuracy, at moderate prices.
Repairing in the above branches promptly attended to.

J. JACKSON AND CO., ENGINEERS, LONDON, E.C.

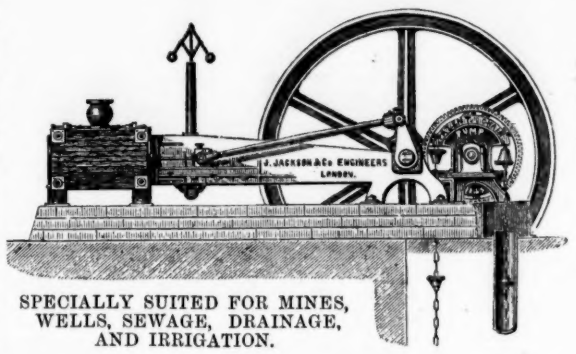
BASTIER'S PATENT CHAIN PUMP.

This is the most efficient pump ever introduced to public notice for deep vertical lifts. It is cheap in its first cost, requires no cleaning and little attention, and the cost of maintaining it with duplicate wearing parts is very small.

The water is lifted through vertical tubes. At every interval of 50 yards a contracted part, or working barrel, is inserted, smaller in diameter than the main pipe, one of which is always placed at the lower end. An endless chain passes over the driving wheel at the top, going down free, and coming up through the tube, into which it enters by a bell-shaped mouth-piece. On this chain are fixed india-rubber discs, smaller in diameter than the main pipe, but fitting tight in the working barrels, so that all the water that enters is forced up and carried through the main pipe. The discs being free all round from the pipe for nine-tenths of the whole distance, reduces the friction to a minimum.

Eighty-seven per cent. of the whole area of the tube is lifted in water. A 3½ in. pump has lifted 120 gallons per minute, from a depth of 270 ft., with 10·75 indicated horse power; other sizes in proportion.

These pumps are now at work throughout England, sizes varying from 2½ to 15 in. diameter, and up to 300 ft. deep.



SPECIALLY SUITED FOR MINES, WELLS, SEWAGE, DRAINAGE, AND IRRIGATION.

PUMPS WITH STEAM ENGINES, AND CATTLE, WIND, OR HAND-POWER GEAR,

Manufactured by the proprietors of the patent,

J. JACKSON AND CO.,

17, GRACECHURCH STREET, LONDON, E.C.

PRICE LISTS ON APPLICATION.

FOR THE COUNTIES OF NORTHUMBERLAND, DURHAM, YORK, DERBY, AND NORTH STAFFORD, APPLY TO

MR. THOMAS GREENER,

MINING OFFICE, NORTHGATE, DARLINGTON:

AGENTS FOR SCOTLAND,

MESSRS. P. AND W. MACLELLAN,

127 and 129, TRONGATE, GLASGOW.

137

A SMALL PUMP MAY BE SEEN AT WORK ON APPLICATION TO MESSRS. J. H. GREENER AND CO., 5, JOHN STREET, ADELPHI, W.C., WHO WILL ALSO SUPPLY ANY INFORMATION REQUIRED.

IMMENSE SAVING OF LABOUR.

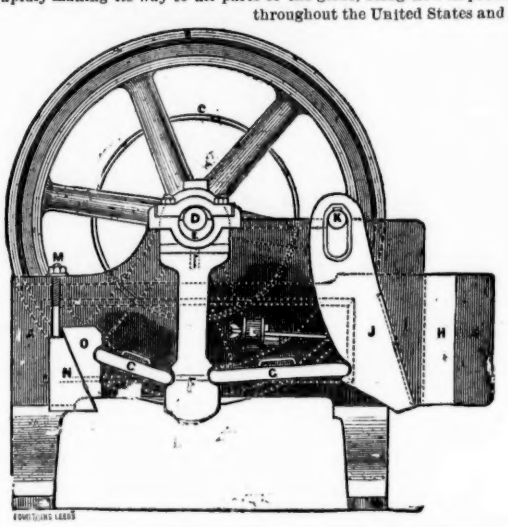
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw s about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. —— THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly,—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

133

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

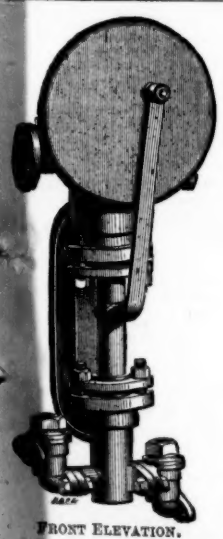
His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

134

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.



FRONT ELEVATION.

THE NEW PATENT INJECTOR,

FOR FEEDING BOILERS AND RAISING WATER FOR OTHER PURPOSES.

PRICES, DELIVERED IN LONDON.

Size. No.	Ram. in.	Stroke. in.	Approx. horse-power boiler supplied.	Approximate gallons thrown per hour. At 100 rev.	150 rev.	200 rev. p. min.	Price.
4	1⅛	3	15	115	172	230	£10 10
5	1⅞	3	22	180	270	360	12 12
6	1⅞	4	30	240	360	480	14 14
7	2¼	4	40	345	517	690	17 0
8	2¼	5½	55	475	712	950	19 10
9	2⅞	5½	75	585	877	1170	22 10
10	2⅞	6¾	90	720	1080	1440	25 10
11	2¾	6¾	110	870	1305	1740	28 10
12	2¾	8	120	1030	1545	2060	31 10
*14	3	8	230	2450	3675	—	40 0
*16	3¼	8	460	4900	7350	—	55 0

* The two last are double-acting.

Steam Regulator Valves, and also Check Valves, specially made to suit these Engines, can be supplied.

Terms: Nett Cash on Delivery.

A CIRCULAR, WITH FULL EXPLANATION AND COMPARISONS, WILL BE SENT ON APPLICATION.

135

BROWN, WILSON, AND CO.,

No. 80, CANNON STREET, E.C.; AND VAUXHALL IRON WORKS, LONDON, S.

PATENT FLEXIBLE TUBING,

AND BRATTICE CLOTH FOR MINES

MANUFACTURED BY

ELLIS LEVER,

WEST GORTON WORKS, MANCHESTER.

136

BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION," in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH THE COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

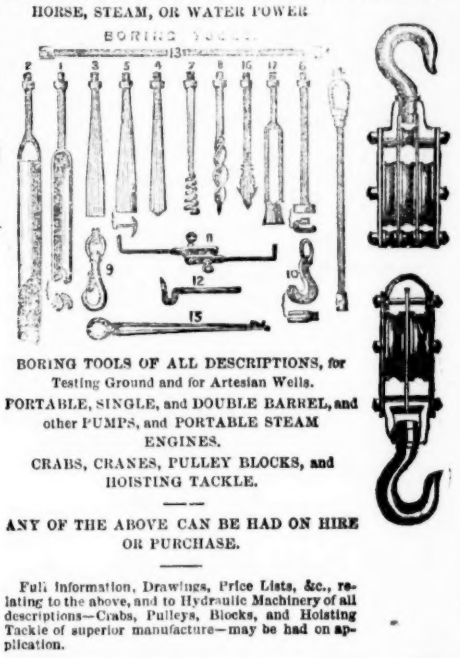
138

S. OWENS AND CO. (LATE CLINTON AND OWENS),

WHITEFRIARS STREET, FLEET STREET, LONDON, E.C.,

HYDRAULIC AND GENERAL ENGINEERS,

MANUFACTURERS OF PUMPS OF EVERY DESCRIPTION FOR HAND, HORSE, STEAM, OR WATER POWER



BORING TOOLS OF ALL DESCRIPTIONS, for Testing Ground and for Artesian Wells.

PORTABLE, SINGLE, and DOUBLE BARREL, and other PUMPS, and PORTABLE STEAM ENGINES.

CRABS, CRANES, PULLEY BLOCKS, and HOISTING TACKLE.

ANY OF THE ABOVE CAN BE HAD ON HIRE OR PURCHASE.

Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.

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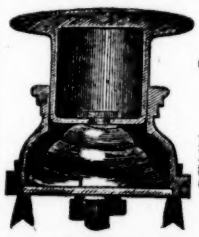
THOMAS TURTON AND SONS,

MANUFACTURERS OF



CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CKANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL
BLISTER STEEL,
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GERMAN STEEL,

FILES MARKED T. TURTON
EDGE TOOLS MARKED WM. GREAVES & SON

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.

Where the largest stock of steel, files, tools, &c., may be selected from.

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Swan Rope Works.

GARNOCK BIBBY, AND CO.,

CHAPEL STREET, LIVERPOOL,

MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.

MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.

WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

141

CREASE'S NEW AND IMPROVED PNEUMATIC TUNNELLING ENGINE.

THE PROPRIETORS of this INVENTION, in order to bring its CAPABILITIES more prominently before the PUBLIC, are OPEN to TAKE CONTRACTS for DRIVING LEVELS.

Preference will be given to ADIT LEVELS and those places where ROTATORY MACHINERY is in use, and can be applied to driving the AIR COMPRESSOR.

Address—E. S. CREASE, 7, Hoe-street, Plymouth.

142

NERVOUS DEBILITY: ITS CAUSE AND CURE.—Before seeking aid from the so-called remedies without medicine, read this valuable work on the Treatment and Cure of Nervous and Physical Debility, Loss of Appetite, Pains in the Back, Spermatorrhœa, &c., with Plain Directions for Perfect Restoration to Health. Sent post free to any address, on receipt of two postage stamps. Letters of enquiry or details of case promptly answered.
Address, Dr. SMITH, 8, Burton-crescent, London, W.C.

143

DR. WATSON (of the Lock Hospital), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Lowness of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration. Sent free for two stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 3, and 6 till 8; Sundays, 10 till 1.

144

Just published, post free for two stamps,

WONDERFUL MEDICAL DISCOVERY, demonstrating the true causes of Nervous, Mental, and Physical Debility, Lowness of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C.

145

Dog Licences.

INLAND REVENUE, SOMERSET HOUSE.

THE COMMISSIONERS of INLAND REVENUE give notice that all DOG LICENCES granted in the year 1867 EXPIRED on the 31st December last, and that EVERY PERSON KEEPING a DOG in the current year is NOW REQUIRED to TAKE OUT a NEW LICENCE, the duty payable for each dog kept being 5s.

The penalty for keeping a dog without licence is £5.

Post-office Orders payable at the chief Money Order Office, Inland Revenue, receipt stamps or postage stamps, may be remitted in payment of duty on dogs kept in London and its vicinity, to the undermentioned collectors of Inland Revenue:—

Collector, London West, Somerset-house, W.C.
Collector, London Central, Winchester-buildings, Winchester-street, E.C.
Collector, London East, Tower-hill, E.C.
Collector, London South, Elephant-buildings, Newington-butts, S.
Collector, London North, 183, Great Portland-street, W.

Licences may be obtained on personal application at the Collector's Offices, before mentioned, and also at the following places until the 15th February prox., between the hours of 10 and 4 each day:—

Gresham-house, Old Broad-street, E.C. Supervisor's Office.
Stepney, 31, Stepney-green. Supervisor's Office.
Dalston and Hackney, 229, Hackney-road. Supervisor's Office.
Islington and Holloway, and Highgate, 6, Pullen's-row. Supervisor's Office.
Paddington, 9, Porteous-road, Harrow-road. Supervisor's Office.
Lambeth and Vauxhall, 67, Vauxhall-walk. Supervisor's Office.
Hampstead and Camden-town, 40, Gloucester-street, Camden-town. Supervisor's Office.

WM. CORBETT, Secretary.

Inland Revenue, Somerset-house, 7th January, 1868.

King's College, London.

DEPARTMENT OF APPLIED SCIENCES.—LECTURES will COMMENCE on THURSDAY, 23d of January. New students must present themselves at Eleven A.M. on the preceding Wednesday.

These Lectures are adapted for those who wish to enter the Architectural, Engineering, or Mining professions, or who wish to engage in Manufacturing or Chemical processes.

Students who have passed two years in this department, and in addition not less than one year in practice under a civil or mechanical engineer, are, by a special order of the Secretary of State for India in Council, admitted to be candidates for appointments in the Engineering Establishment of the Department of Public Works in India.

Subjects taught—Mathematics, Natural Philosophy, Arts of Construction, Manufacturing Art and Machinery, Land Surveying and Levelling, Geometrical and Engineering Drawing, Chemistry, Geology and Mineralogy, Workshop, Photography,

For information, apply personally, or by letter, marked outside "Prospectus," to J. W. CUNNINGHAM, Esq., Secretary.

Geology.—King's College, London.

PROFESSOR TENNANT, F.G.S., will COMMENCE a COURSE of LECTURES on GEOLOGY on FRIDAY, Jan. 24, at Nine A.M. They will be continued on each succeeding Wednesday and Friday at the same hour. A shorter Course will also be given on Thursday evenings, from Eight to Nine. First Lecture Jan. 23. Text-book: Lyell's "Elements of Geology."

Prof. TENNANT accompanies his students to the public museums and to places of geological interest in the country. R. W. JELF, D.D., Principal.

GOOD INCOME ON SMALL OUTLAY IN FIRST-CLASS MINES.

MR. CHARLES WATSON, 2, CROWN COURT, THREADNEEDLE STREET, recommends with confidence HALF-A-DOZEN VALUABLE MINES, paying from 10 to 20 per cent.

Mr. CHARLES WATSON has the FOLLOWING FIRST-CLASS SECURITIES for INVESTMENT:—Indian 5 per cent. Railways, guaranteed by the Council of India; Colonial Bonds; United States 5-20 Bonds. Brazilian and Egyptian Bonds pay from 5 to 8 per cent. as regularly as Consols. Turkish 1865 Loan pays 15 per cent. without liability.

A List of Dividend-paying Mines and of carefully selected Investments sent free by Mr. CHARLES WATSON, Stock, Share, Consol, and Mining Dealer, 2 Crown-court, Threadneedle-street, E.C.

MESSRS. WILSON, WARD, AND CO., SHAREDEALERS, 16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

BUYERS of any number of Frontino and Bolivia, and New Great Consols, shares at full market price. A special report upon New Great Consols Mine can be had on application, post free.

We strongly recommend for investment the shares in the Penhale United Silver-Lead Mining Company (Limited), the prospectus of which is just issued. We understand that nearly three-quarters of the shares are already subscribed for.

MESSRS. J. TAYLOR AND CO., FINANCIAL, MINING, AND GENERAL AGENTS, 17, CROSS STREET, MANCHESTER, have the following SHARES FOR SALE:—

10 Great North Laxey. 50 West St. Ives. 50 Great Mona.
5 Clifford. 5 Great Laxey.

THIRTY POUNDS PER CENT. PER ANNUM.

THE SUMMER HILL LEAD MINE, near MOLD, pays the investor this amount in two-monthly dividends. Price of shares, £13 nett. Dividend on each share per annum, £4 10s.

Application to be made to Mr. T. E. W. THOMAS, 3 and 4, Great Winchester-street-buildings, London, E.C.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER, 30, GREAT ST. HELEN'S, E.C.

MR. J. N. MAUGHAN, STOCK AND SHAREBROKER (Member of the Stock Exchange), No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE. Transacts business in Railways, Funds, and every description of Mines. Bankers: Messrs. Lambton and Co.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C., DEALS in ALL *bona fide* MINE SHARES, either for immediate cash or the fortnightly account, at fair market prices.

Has BUSINESS in the following:—

		Westminster (Limited)
Don Pedro Gold.	Chiverton Moor.	Bryn Gwiog.
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Port Phillip Gold.	Great Vor.	South Crofty.
Frontino and Bolivia Gold.	West Tolgus.	Camborne Vean.
	West Frances.	Ding Dong.
Rossa Grande Gold.	Wheal Trelawny.	Worthing.

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Mine Shares and all Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given.

JAMES SCOTT and Co. are the proprietors of the "British and Foreign Mining Circular," published immediately after the Stock Exchange fortnightly settlements.

MESSRS. KEANE AND CO., MINING AGENTS, AND SHAREDEALERS, 90, CANNON STREET, LONDON, E.C., and BRIDGEWATER CHAMBERS, BROWN STREET, MANCHESTER.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

Mining, Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent. per annum.

Offices, 5, Finsbury-street, London, E.C.

MANCHESTER, AND WEST END OF LONDON.

MR. W. HANNAM, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER. ROYAL INSURANCE BUILDINGS, KING STREET MANCHESTER; and 449, STRAND, LONDON, W.

INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

ROBERT LIBBY AND SON, MINE AND SHAREDEALERS, &c., CAMBORNE, CORNWALL.

CONSULTING RAILWAY AND MINING ENGINEER.—MR. TREDINNICK, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON (Office of Registry of British and Foreign Mines). Vendors introduced to purchasers upon terms as may be agreed. Registration fee, 21s.

Plans and sections, with reports, carefully preserved, and open to inspection for a fee of 5s.

Railways and Mines should be selected with great caution, and those who hold will do well earnestly to look into the character and merits of those they now possess. The uninitiated should approach these securities only through the aid of practical authorities. Mr. TREDINNICK can be confidently consulted, either personally or by letter, for a fee of 21s., and the services of efficient and practical brokers introduced, if required.

MINERAL LANDS OF NOVA SCOTIA.

INTERNATIONAL MINING AGENCY, OFFICE, SOMERSET HOUSE, PRINCE STREET, MAIL ADDRESS, BOX 266, G.P.O., HALIFAX, NOVA SCOTIA. A. HEATHERINGTON, PROPRIETOR.

A Register kept of every description of Mineral Lands and Mining Shares for Sale.—Properties Viewed and Reported on, and their Purchase or Sale, when required, negotiated for a moderate commission.—The services of Explorers, Overseers, &c., engaged for Mine Owners.—Maps, Diagrams, Statistics, and useful information regarding each district supplied.—Returns made for absent proprietors.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		9 2 8	0 5 0	Nov. 1867
200	Botallack, t, c, St. Just	91 5 0	—		488 15 0	5 0 0	May 1866
4000	Brookwood, c, Buckfastleigh	1 11 0	—		0 7 6	0 2 6	Dec. 1867
1000	Bronfloyd, l, Cardigan*	12 0 0	—		8 17 0	0 10 0	Nov. 1867
6400	Cashwell, l, Cumberland*	2 10 0	—		0 1 6	0 1 6	Aug. 1866
916	Cargoll, s-l, Newlyn	15 5 7	—		13 15 0	1 0 0	Feb. 1866
509	Creegbrawse and Penkevil, t	—	—		1 0 0	1 0 0	Oct. 1867
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		25 18 0	1 0 0	Jan. 1868
128	Cwmystwith, l, Cardiganshire	60 0 0	—		381 10 0	2 0 0	Dec. 1867
280	Derwent Mines, s-l, Durham	300 0 0	—		174 10 0	5 0 0	June 1867
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	430	425 435	1081 0 0	7 0 0	Nov. 1867
656	Ding Dong, t, Gulval‡	49 14 6	—		0 10 0	0 10 0	Sept. 1867
358	Dolcoath, c, t, Camborne	128 17 6	—		837 10 0	3 0 0	Dec. 1867
6144	East Caradon, c, St. Cleer†	2 14 6	5⅛	4⅝ 4⅞	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		150 10 0	2 0 0	Dec. 1867
128	East Pool, t, c, Pool, Illogan	24 5 0	—		422 10 0	5 0 0	Jan. 1868
1906	East Wheal Lovell, t, Wendron	3 9 0	8½	8¼ 8½	3 11 6	0 10 0	Dec. 1867
2800	Foxdale, l, Isle of Man*	25 0 0	—		71 0 0	0 10 0	Sept. 1867
5000	Frank Mills, l, Christow	3 18 6	—		3 5 6	0 5 0	Feb. 1866
3950	Gawton, c, Tavistock	3 10 6	3½		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	17½	17 18	7 15 0	0 10 0	Dec. 1867
5908	Great Wheal Vor, t, c, Helston†	40 0 0	17½	18 19	12 8 0	0 7 6	Dec. 1867
1024	Herodsfoot, l, near Liskeard†	8 10 0	—		43 10 0	1 10 0	Oct. 1867
6000	Hingston Down, c, Calstock†	5 10 6	—		0 10 0	0 5 0	April 1866
400	Lisburne, l, Cardiganshire	18 15 0	—		498 10 0	3 0 0	Dec. 1867
3000	Maes-y-Safn, l, Flint*	20 0 0	29	27½ 30	3 0 0	1 0 0	Dec. 1867
9000	Marke Valley, c, Caradon	4 10 6	6¼	6 6¼	4 4 6	0 3 6	Jan. 1868
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. l, Wrexham*	25 0 0	175	170 175	223 13 0	4 15 0	Nov. 1867
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	17⅞	17⅜ 17½	—	0 5 7	Jan. 1867
40000	Mwyndy Iron Ore*†	3 5 0			0 6 6	0 2 6	Mar. 1866
200	Parys Mines, c, Anglesey*	50 0 0	—		157 10 0	5 0 0	Jan. 1866
12800	Prince of Wales, t, Calstock	0 12 6	2¼	3 3¼	0 3 6	0 1 0	Nov. 1867
6000	Prosper United, t, c, St. Hilary	8 14 0	—		0 5 0	0 5 0	Feb. 1867
1120	Providence, t, Uny Lelant†	10 6 7	28		84 2 6	0 15 0	Nov. 1867
512	South Caradon, c, St. Cleer†	1 5 0	410		568 10 0	6 0 0	Nov. 1867
6000	South Darren, l, Cardigan*	3 6 6	—		0 8 6	0 1 6	Oct. 1867
496	So. Wh. Frances, c, Illog.†‡	18 18 9	26	24 26	373 13 6	1 0 0	Jan. 1868
508	Summer Hill, l, Mold	3 13 6	—		2 2 6	0 7 6	Jan. 1868
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	14	13 14	19 1 0	0 5 0	Nov. 1867
2000	Trumpet Cons., t, Helston	11 10 0	—		12 0 0	0 7 6	Dec. 1867
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	70	66 68	23 7 6	2 0 0	Nov. 1867
5000	West Godolphin, t, c, Breage	0 1 0	3½		0 2 0	0 2 0	Dec. 1867
400	W. Wheal Seton, c, Camborne†	47 10 0	200		485 0 0	4 10 0	Dec. 1867
512	Wheal Basset, c, Illogan†	5 2 6	85	80 82½	629 0 0	2 0 0	Dec. 1867
1024	Wheal Friendship, c, Tavistock	20 0 0	—		300 10 0	0 10 0	Nov. 1866
4295	Wheal Kitty, t, St. Agnes	5 4 6	2¾		3 3 0	0 2 0	Nov. 1867
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	20	19 20	63 7 6	0 17 6	Dec. 1867
2000	Wheal Rose, c, Scorrier	—	—		1 0 0	0 10 0	Feb. 1866
396	Wheal Seton, t, c, Camborne	58 10 0	87½	85 90	252 15 0	3 0 0	Dec. 1867
3000	Whitewell Lead, Clitheroe*	0 5 0	—		1 0 0	0 10 0	Dec. 1867
17000	Wicklow, c, i, Wicklow	2 10 0	16⅞	16⅞	48 10 0	0 15 0	Oct. 1867

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	1⅛	1 1½	0 1 0	0 1 0	Oct. 1867
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 0	0 1 0	Aug. 1867
15000	Cape Copper Mining*†	7 0 0	—	6½ 7½	2 12 6	0 10 0	April 1866
76000	Don Pedro North del Rey*†‡	0 14 0	3⅝	3¾ 3⅞	0 10 9	0 3 0	Nov. 1867
25000	Fortuna, l, Spain*†	2 0 0	2	1¾ 2	1 7 4	0 2 0	Oct. 1867
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0	—	13⅞ 14	23 10 0	0 15 0	June 1867
10000	Gonnesa, l,* [5000 £5 pd., 5000 £4 pd.]		—		10 per cent.		July 1867
68000	Kapunda Mining Co., Austra†‡	1 0 0	½	¼ ½	0 0 10	0 0 10	Nov. 1867
15000	Linares, t, Spain*†	3 0 0	1¾	1¼ 1¾	11 8 4	0 2 0	Oct. 1867
50000	Panulcillo, c, Chili*†	3 0 0	1	¾ 1	10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	100 0 0	—		—	—	
80000	Pestarena, g, Italy*†	2 12 6	2⅝	2⅜ 2⅝	0 2 6	0 2 6	Mar. 1867
100000	Pontgibaud, s-l, France†	20 0 0	—	9 11	4 14 3	0 11 0	June 1867
10000	Port Phillip, g, Clunes†	1 0 0	1½	1⅜ 1½	0 18 6	0 1 0	Oct. 1867
20000	Scottish Australian Min. Co.†	1 0 0	—	1 1⅛	7½ per cent.		Nov. 1867
11000	St. John del Rey, Brazil*†	15 0 0	39	30½	81 10 0	4 5 0	Dec. 1867
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 0	0 1 0	Jan. 1866
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, s, Argentine Republic*	1 0 0	1½	1¼ 1½	
100000	Anglo-Brazilian, g*†	0 10 0	⅝	½ ⅝	Nov. 1866
12500	Anglo-Italian, g*†	0 5 0	—	⅜ ½	May 1867
2464	Burra Burra, c, South Australia‡	5 0 0	—	30 31	
25000	Capula, s, Mexico*†	1 12 0	—		Aug. 1866
30000	Chontales, g, s, Nicaragua*†	4 10 0	3¼	3⅝ 3⅞	Nov. 1867
12000	Cobre Copper Company, c, Cuba†‡	43 10 0	—		May 1867
10000	Copiapo Mining Company, Chili†‡	16 10 0	—		
10000	Copiapo Smelting, Chili*	10 0 0	—		April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
8000	English and Canadian Mining Company*	5 0 0	—		Fully pd.
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 15 0	⅞	19s. 21s.	June 1867
10000	Great Barrier Land, Mining, &c., New Zealand	5 0 0	—		Fully pd.
80000	Great Northern, c, South Australia†	1 11 6	—		Sept. 1862
7927	Lusitanian (Portugal)†‡	3 0 0	—		
83090	Mariquita, g, s, New Granada	0 17 6	—		Sept. 1867
12500	Nerbudda Coal and Iron, India*†	6 0 0	—		Dec. 1867
51000	New Quebrada, c, Venezuela*†	3 10 0	—		
50000	Nova Scotia Land and Gold*	1 15 0	—		Sept. 1865
15000	Otea, c, New Zealand*	2 0 0	—		Fully pd.
10178	Rhenish Consolidated, l [6000 £5 pd., 4178 £2 10s. pd.]		—		May 1866
100000	Rossa Grande, g, Brazil*†	0 12 0	⅝	⅝ ¾	June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
100000	Taquaril, g, Brazil*	0 5 0	—		Oct. 1867
6000	Terreseu, s-l, Isle of Sardinia	2 0 0	—		
43174	United Mexican, s, Mexico†‡	28 5 0	—	1¼	
10000	Vancouver, cl*†‡	6 0 0			
6000	Val Sassam, s, c, l, Italy*†	7 0 0	—		Aug. 1867
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g, Nevada†	5 0 0	—		Fully pd.
80000	Worthing, c, South Australia*†	1 0 0	—	¼ ½	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	—		Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	—	⅞ 1⅛	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4000	Bedford United, c, Tavistock*	2 6 8	—		
5000	Bryn Gwiog, l, Flint	0 18 0	—		June 1864
914	Caradon Consols c, St. Cleer	32 13 6	—		Aug. 1867
1000	Carn Brea, c, t, Illogan‡	28 0 0	25	24 26	May 1867
5000	Carnarvonshire, l, Carnarvon*	4 0 0	5½	5 6	Fully pd.
3000	Chiverton, l, Perranzabuloe	9 12 6	5¼	4¾ 5	Nov. 1867
3000	Chiverton Moor, l, Perranzabuloe	6 8 6	5¾	5¾ 6	Aug. 1867
2880	Clifford Amalgamated, c, Gwennap‡	33 17 6	5⅞	6 6¼	June 1867
2450	Cook's Kitchen, c, Illogan‡	19 14 9	10	9 10	July 1866
1055	Craddock Moor, c, St. Cleer‡	12 18 0	—		Nov. 1867
12800	Drake Walls, t, Calstock‡	2 5 0	½	⅜ ½	Dec. 1866
512	East Basset, c, Redruth†‡	33 10 0	12	11 12	Nov. 1867
6000	East Carn Brea, c, Redruth‡	3 15 0	2⅜	2 2¼	
6000	East Grenville, c, Camborne	3 12 6	2⅜	2⅛ 2¼	Nov. 1867
4000	East Wheal Russell, c, Tavistock†	12 10 6	1⅜	1¼ 1½	Oct. 1867
6144	Gonamena, c, St. Cleer	7 3 6	—		Dec. 1867
5000	Great North Downs, c, Redruth	6 13 0	4½	4 4½	Feb. 1867
4800	Great Retallack, s-l, b, Perranzabuloe	2 4 0	3¼	3¼ 3½	July 1867
6000	Great South Chiverton, s-l, Perranzabuloe	1 10 6	—		Oct. 1867
5143	Great South Tolgus, c, Redruth	1 4 0	1⅛	20s. 22s.	June 1867
1798	Great Wheal Fortune, t, Breage	30 10 6	3½		Nov. 1867
1024	Nangiles, t, c, Kea	28 17 0	—		Oct. 1867
400	New Wheal Seton, c, Camborne	58 10 0	80	70 80	Aug. 1867
3457	North Downs, c, Redruth	5 8 10	1		Jan. 1868
695	North Roskear, c, Camborne	54 17 0	6	4 6	Nov. 1867
5936	North Treskerby, c, St. Agnes	1 9 0	30s.	29s. 31s.	Dec. 1860
5610	North Wheal Crofty, c, Illogan†	3 11 3	2¼	2⅜ 2⅝	July 1866
3000	North Wheal Chiverton, l, Perranzabuloe	4 0 0	4½		Mar. 1867
5000	Old Westminster, l, Denbigh	2 0 0	7½	5½ 7½	June 1867
8465	Pedn-an-drea, t, Redruth	6 8 6	—		Nov. 1867
1024	Rose and Chiverton United, l, Newlyn	5 0 0	6¾	6¼ 6½	Nov. 1867
6138	South Condurrow, t, c, Camborne	3 18 6	¾	⅝ ¾	Oct. 1867
940	St. Ives Consols, t, St. Ives‡	10 15 0	—		Nov. 1867
920	Stray Park, c, t, Camborne†‡	44 13 8	4		Jan. 1868
6000	Tamar Valley, s-l, Beeralston	0 5 0	—		Nov. 1866
548	Trelyon Consols, t, St. Ives	16 0 0	—		Dec. 1866
6000	West Basset, c, Illogan†‡	1 15 0	2¼	1¾ 2¼	Mar. 1867
1024	West Caradon, c, St. Cleer‡‡	19 0 0	10½	9½ 10½	Nov. 1866
12800	West Drake Walls, c, Calstock	0 2 6	½	8s. 10s.	Mar. 1867
2582	West Great Work, t, Breage	5 11 0	—	3 3¼	June 1866
6000	Westminster, Flint, l*	5 0 0	5¼	5 5½	Fully pd.
6000	West St. Ives, t, c, St. Ives	0 1 0	⅝	⅜ ⅝	Oct. 1865
5000	West Wheal Kitty, t, St. Agnes	2 19 6	1	⅝ ⅞	Dec. 1867
6000	Wheal Agar, c, Illogan	7 11 0	—		Jan. 1868
512	Wheal Buller, c, Redruth†‡	22 15 0	18	16 17	Oct. 1867
849	Wheal Emily Henrietta, c, Illogan	19 5 0	—		Oct. 1867
6000	Wheal Grenville, c, Camborne†	10 5 0	1⅞	2 2¼	Sept. 1867
1040	Wheal Trelawny, s-l, Liskeard†	6 17 0	9	7 9	Dec. 1867
5000	Wheal Uny, t, c, Redruth	10 14 6	1½	1 1½	Oct. 1867

b, blende; *cl*, coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl.*, slate; *s-l*, silver-lead; *t*, tin; *z*, zinc.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done
4000	Ballacorkish, I. of Man, l, c*	3 5 0	—	
1031	Bedol Aur, l, Holywell	1 12 0	—	
1248	Boscaswell, t, c, St. Just	7 6 0	—	
2500	Bosworthen and Penzance	4 0 0	—	
5000	Bottle Hill, t, Plympton	1 14 6	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
1000	Budnick Cons., c, t, Perranz.	—	—	
6000	Bwadrain Consols, c	3 2 0	—	
5094	Bwlch Consols, s-l, Cardigan	4 0 0	—	
30000	Caldbeck Fells, l, Cumberld.*	1 15 0	—	
1000	Camborne Consols, c	18 10 0	—	
4600	Camborne Vean & Wh. Frn., c	11 18 1	—	
11000	Cape Cornwall, t, c* [8000 £2 10s. pd., 3000 25s. pd.]			
1000	Cardynham China-clay*	3 0 0	—	
6000	Carn Camborne, c, Cambrn.	2 4 6	—	
4005	Cardigan Consols*	5 0 0	—	
600	Cardiganshire, l*	17 10 0	—	
20000	Carysfort [3200 £2¼ pd., 16800 £1½ pd.]			
2500	Central Minera, l, Wrexham*	3 17 6	—	
16000	Central Snailbeach l*	1 0 0	—	1 1¼
4000	Clara, l, Llywernog	2 18 6	—	
2048	Colquite & Callington U., c	0 5 0	—	
256	Condurrow, c, t, Camborne‡	76 10 0	—	
50000	Connorree, c, sul, Wicklow*	1 0 0	6s.	¼
988	Copper Hill, c, Redruth‡	12 10 0	—	
7324	Cornish Clay and Tin Works	1 0 0	—	
12000	Crelake, c, Tavistock	3 12 0	—	
6000	Cuddra, t, St. Austell	5 5 0	—	
40000	Dale, l, North Stafford	1 0 0	—	
25000	Dundalk, Ireland, l*	0 15 0	—	
740	Eaglebrook, l, Talybont*	19 15 0	—	
1000	East Basset and Grylls, t	3 5 0	—	
4000	East Chiverton, l, Perranz.	2 16 9	—	
4000	E. Gunnislake & S. Bed. c	10 12 6	2	2 2¼
6000	East Laxey, l, Isle of Man	2 15 0	—	
6000	East Neptune, c, Marazion	—	—	
5000	E. Rosewarne, c, t, Gwinear	2 17 0	⅛	¼ ½
6000	East Snaefell, l, I. of Man*	2 10 0	1½	1¼ 1½
5610	East Seton, c, Camborne	0 13 6	—	
1190	E. Wh. Agar, c, St. Cleer	12 17 0	—	
5000	E. Wh. Rose Con., l, Per.*	2 0 0	—	
6000	Ebury Lead Min. Co., Flint*	1 5 0	1½	1¼ 1½
6000	Fortescue Cons., c, Tavistock	0 12 6	—	
940	Fowey Con., c, Tywardreath‡	5 4 6	—	
1026	Garden, c, Morvah	6 0 3	2	
6000	Gen. Min. Co. for Ireland, c.	5 10 0	—	
40000	Glasgow Caradon c* [30000 £1 pd., 10000 15. pd.]			
5700	Goginan, Cardigon, l	12 10 0	—	
6000	Gothic, s-l, Cardigan*	2 10 0	—	
486	Grambler & St. Aubyn, c†‡	72 0 0	—	
10000	Great Cwmsymlog, s-l*	1 15 0	—	
4096	Great Caradon, c, St. Ive	3 19 0	—	
3000	Gt. Chiverton, s-l, Perranz.*	3 10 0	—	
3000	Gt. East Lovell, t, Helston	2 1 0	—	
5000	Great Mona, l, Isle of Man*	4 0 0	—	
12500	Gt. No. Laxey (Isle of Man)*	0 15 0	—	⅝ ⅞
1000	Great N. Tolgus, c, Illogan	10 0 0	—	
3313	Gt. Wh. Baddern, t, Devoran	7 17 6	—	
119	Great Work, t, Germoe	100 0 0	—	
10240	Gunnislake (Clitters'), t, c	4 19 0	—	
6068	Gwydyr Park, l, Llanrwst	1 14 6	—	
6400	Harwood, l, Durham*	0 6 0	—	
6000	Hennock Iron Company	0 5 0	—	
2500	Laxey Neath Smelting Co.*	1 10 0	—	
1019	Leeds and St. Aubyn, t, c	19 13 4	—	
151	Levant, c, t, St. Just	10 8 1	—	
2325	Lonsdale Iron Co. [650 £5 pd., 1675 £3 pd.]			
5120	Lovell Consols, Wendron, t.	0 3 0	—	
6090	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, s-l,*	1 17 0	—	
640	Mount Pleasant, l, Mold	4 0 0	—	
12800	Nether Hearth* [6400 £1 pd., 6400 2s. pd.]			
6000	New Birch Tor & Vitifer, t‡	1 13 6	—	
1500	New Chiverton, l, Perranz.	0 9 6	8s.	
6000	New Clifford, c, Gwennap*	2 10 0	—	
24000	New Cornish [12000 £1 pd., 12000 15s. pd.]			
6400	N. Crow Hill, l, St. Stephen.	3 5 6	—	
6514	New E. Russell, c, Tavistock	0 12 6	—	
20000	New Gt. Cons., c, Tavistock*	0 15 0	—	
3000	New Huntingdon, t, Devon	0 1 0	1	1
6400	New Pembroke, St. Blaz. t, c	1 7 0	—	
6000	New Prosper, t, c, St. Hilary	0 10 0	—	9s. 11s.
5755	New Treleigh, c, Redruth	4 8 0	—	
667	New Trevenen, t, Wendron	12 1 6	—	
4096	New Wh. Lovell, t, Wendron	1 10 0	—	
2000	N. Wh. Towan, c, t, Wendron	1 10 0	—	
16000	N. Devon, s-l, Combmartin	0 19 0	—	
5000	No. Dolcoath, c, Camborne	4 3 0	—	
1361	No. Grambler, c, Redruth	8 5 3	—	
6000	North Jane, t, s-l, Kenwyn	3 1 6	—	
2000	North Levant, t, c, St. Just	10 12 0	—	5¼ 5¾
4000	No. Phœnix, c, Linkinhorne	4 11 0	—	
3933	North Pool, c, Illogan	5 16 0	—	
1024	No. Retallack, c, Perrazabuloe	2 0 0	—	
1935	No. Shepherds, l, Newlyn*	6 10 0	—	
6000	North Wheal Basset, c, t†	5 0 0	—	1 1¼
6144	N.W. Robert, c, Smp. Spiney	4 8 11	—	
12288	Okel Tor, c, Calstock	2 7 4	—	
8000	Old Gunnislake, c, Calstock	2 15 0	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5000	Pendeen Consols, c, St. Just	6 11 0	—	
2720	Penhale Wh. Vor, t, c, Breage	4 12 6	—	
5000	Penhalls, t, St. Agnes	3 0 0	—	
1772	Polberro, t, St. Agnes	15 0 0	—	
12000	Redmoor, c, t, Callington	1 15 6	—	
6000	Reinnie Laxey, l, I. of Man*	4 10 0	—	
2000	Rosecliff and Tolcarne, l*	9 0 0	—	
3973	Rosewarne Cons., c, Gwinear	5 12 6	—	
5915	Rosewall Hill & Ransom, c.	3 0 0	1⅝	1⅜ 1½
3848	Rosewarne Un. c, t, Gwinear	4 3 0	—	
16000	Shropshire Copper, c*	2 10 0	—	
20500	Snaefell, l, Isle of Man*	1 0 0	—	
400	Silver Brook, s-l, Carmar.*	10 0 0	—	
12000	Sortridge Cons., c, Tavistk.†	1 18 6	—	
512	South Basset, c, Gwennap	27 0 0	9	8 9
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
6000	S. Dolcoath & Carnarth. Con.	2 16 6	—	
6000	So. Fowey, c, Tywardreath	0 10 0	—	
1024	So. Herodsfoot, l, Liskeard	11 10 0	—	
30210	South of Scotland, c*	1 0 0	—	
2739	South Trevenna, c, t	2 10 0	—	
937	So. Wh. Crofty, c, Illogan	24 10 10	16	13 16
6000	South Wheal Grenville, t, c	1 0 6	—	6s. 8s.
400	So. Wh. Seton, c, Camborne	81 3 0	—	
236	Spearne Consols, t, St. Just	4 4 4	—	
242	Spearne Moor, t, St. Just	6 2 0	—	
673	St. Ives Wh. Allen, t, St. Ives	18 18 7	—	
8771	St. Just Amalg., t,* [6000 £3 10s. pd., 2771 £2 5s. pd.]			
300	Steeple Aston Iron Ore Co.	4 0 0	—	6 6½
7000	Stiperstones, l, Salop*	5 0 0	—	
3500	Tin Hill, t, St. Austell	1 12 0	—	
501	Tresavean and Trethurrup	16 11 0	—	
4440	Trevenen & Tremenheere	7 11 0	—	
4096	Trewetha, s-l, Menheniot	7 17 0	—	
1943	Treworlis, t, Wendron	11 15 4	—	
4200	Vigra and Clogau, c, Dolg.*‡	5 10 0	—	
2500	West Briton, c, Crowan	1 0 0	—	
1319	West Cwm Erfin, l* [319 £4 paid]		—	
256	West Damsel, c, Gwennap	38 10 0	—	
12000	W. Maria & Fortes., c, Lam.	3 11 6	—	
12800	West Prince of Wales, c	0 10 0	—	9s. 11s.
1000	West Rose Down, c, Linking.	20 5 0	—	
512	West Tolgus, c, Redruth	58 10 0	—	19 21
512	W. Wh. Frances, t, Illogan	105 15 0	10	11 12
4096	W. Wh. Tremayne, c, St. Erth	0 6 0	—	
741	Wheal Basset and Grylls, t	7 18 6	—	
6000	Wheal Crebor, c, Tavistock	2 5 6	—	
4000	Wh. Emma, c, Buckfastleigh	3 19 0	—	
6000	Wheal Emily, s, Callington	0 1 0	2¼	2⅜ 2¼
6000	Wheal Ida, s-l, St. Ive	1 5 0	—	
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	—	
512	Wheal Jane, s-l, Kea	10 10 0	—	
896	Wh. Margaret, t, Uny Le.‡	13 17 6	—	
728	Wheal Margery, St. Ives, t, c	26 14 0	—	
6000	Wheal Mary Florence, c*	2 2 0	—	
1000	Wh. Mary Hutchins, c, Plymp.	2 0 6	—	
80	Wheal Owles, t, St. Just‡	70 0 0	—	
6000	Wheal Sparnon, c, Redruth	3 12 0	—	
1920	Wh. Trannack, c, Sithney	1 13 3	—	
1200	Wheal Trevenna, t, c*	10 0 0	—	

MISCELLANEOUS.

Shares.	Company	Paid.	Last Pr.	Bus. done
60000	Anglo-American Telegrh.*†	10 0 0	19⅛	20⅛ 20¼
30000	Central American Associ.*†	1 10 0	⅞	¾ 1
42000	Cop. Min. Eng.† [2000 £25 pd., 40000 £100 pd.]			
80000	Ebbw Vale Iron Co.*†	27 10 0	—	
70000	English and Australian, c‡	2 10 0	⅞	¾ ⅞
4000	Hollybush Coll. and Coke*	5 0 0	—	
148525	London Gen. Omnibus*†	4 0 0	1⅝	1½ 1¾

, Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

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